

***United States Court of Appeals
for the Second Circuit***



**PETITIONER'S
BRIEF**

74-1683

IN THE UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

No. 74-1683

HOOKER CHEMICALS AND PLASTICS CORPORATION,
STAUFFER CHEMICAL COMPANY
AND MONSANTO COMPANY,

Petitioners,

v.

RUSSELL E. TRAIN,

Respondent.

On Petition For Review Of Action Of The
Administrator Of The Environmental
Protection Agency

BRIEF FOR PETITIONERS

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BRIEF FOR PETITIONERS

PRELIMINARY STATEMENT

This is an action to review and set aside regulations establishing new source performance standards for phosphate manufacturing plants issued on February 20, 1974 (39 Fed. Reg. 6579) by the Environmental Protection Agency (EPA) under Section 306 of the Federal Water Pollution Control Act, as amended ("the Act"). The phosphate manufacturing category is made up of three separate subcategories involving 8 different products, all of which are at issue in this case. ^{1/}

^{1/} Petitioner and Respondent under date of September 9, 1974 filed a stipulation and motion to file a single Deferred Consolidated Joint Appendix in this case and No. 74-1687. The record has been paginated by the Government. To avoid confusion, the Government's pagination will be used in the portion of the record included in the deferred Appendix. The Appendix is cited herein as "App."

The Parties

The Petitioners in this case are companies which are engaged in the manufacture of phosphate products, including the products for which the standards of performance are being challenged.

The Respondent is Mr. Russell E. Train, the Administrator of the Environmental Protection Agency.

Questions Presented

1. Do EPA's methodology and criteria for establishing new source standards for each subcategory of the phosphate manufacturing category comply with the Act?
2. Has EPA arbitrarily applied an abstract definition of "process wastewater" limiting or prohibiting discharges from phosphate industry plants?
3. Are EPA's standards of performance for phosphorus, phosphorus oxychloride, phosphorus trichloride, phosphorus pentasulfide, food grade sodium tripolyphosphate, and food grade calcium phosphate plants supported by the Record?
4. Has EPA provided an adequate statement of the basis for its regulations which complies with the law?

Statutes and Regulations Involved

Sections 301, 302, 304, 306, 307, 309, 505 and 509 of the Act (33 U.S.C. §§1311, 1312, 1314, 1316, 1317, 1319, 1365 and 1369), which were added to the Act by the Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, 86 Stat. 816, are set out in

Appendix A infra.

The regulations promulgated by EPA which are at issue in this proceeding were published on February 20, 1974 (39 Fed. Reg. 6579) and appear in the Appendix at 1313-1319 and are in Appendix B infra.

Jurisdiction

Jurisdiction of this Court to review standards of performance for new sources promulgated under Section 306 of the Act (33 U.S.C. §1316) is conferred by Section 509(b)(1)(A) (33 U.S.C. §1369(b)(1)(A)) of the Act.

STATEMENT OF CASE

Scope of Action

This action with respect to new source standards is related to the petition for judicial review (No. 74-1687) of EPA's effluent guidelines under Section 304(b). Both were issued at the same time. ^{1/}

The action relating to the effluent guidelines includes substantial and complex legal issues not present in this action -- namely,

^{1/} Respondent also published on the same day pretreatment standards for new sources under Section 307(c) for new plants using public sewer systems and proposed pretreatment standards for existing sources under Section 307(b). Petitioners and Respondent in this case have stipulated and jointly moved for leave to amend the petition for review and sever it into two petitions, one relating to standards of performance for new sources under Section 306 and one relating to pretreatment standards for new plants under Section 307(c) and have requested that further proceedings on the amended petition relating to Section 307(c) pretreatment standards be deferred or suspended in the interests of conservation of judicial resources and avoidance of piecemeal litigation pending Respondent's publication of final pretreatment standards under Section 307(b) which could affect the scope of or necessity for review of the new source pretreatment standards.

the threshold question of whether this Court has jurisdiction to review the effluent guidelines regulations. The issues on the record as to the validity of the guideline regulations will be reached in No. 74-1687 only if the Court concludes it has jurisdiction to review regulations under Section 304(b).

The effluent guidelines and standards of performance are required by separate provisions of the Act (Sections 304(b) and 306) and, as will be seen, the substantive requirements of Section 306 differ from those in Section 304. However, since EPA promulgated the effluent guidelines and standards of performance at the same time and its factual basis and rationale for the two different regulations were similar and in some cases identical, certain issues arising as to the validity of the standards of performance on the record are comparable to the issues briefed by Petitioners in connection with the effluent guidelines. Where the issues as to the validity of the new source standards are similar to those respecting the guideline regulations, Petitioners have included in this brief a reference to the brief in No. 74-1687 on the effluent guidelines.

The petition, pertaining to EPA's new source performance standards, raises two basic groups of issues:

1. Issues which are common to all subcategories and products and which are covered entirely in Part One of this brief;

2. Issues arising on the record as to the validity of the standards of performance for specific products which are dealt with in Part Two of this brief for five products: elemental phosphorus, phosphorus trichloride and phosphorus oxychloride, phosphorus pentasulfide, food grade sodium tripolyphosphate and food grade calcium phosphate.

The Statutory Framework

In 1972 the Congress enacted the Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, 86 Stat. 816, 33 U.S.C. §§1251, et seq. The Federal Water Pollution Control Act, as extensively revised by the 1972 Amendments, constitutes the organic statute under which are regulated all "point source" effluent discharges from municipalities, from industrial plants and from agricultural facilities, including new plants.

The structure of the Act is based on a general prohibition of discharges except as they are permitted under the law. (§301, 33 U.S.C. §1311.) Permits for effluent discharges, including those for new plants, are issued under Section 402 of the Act, 33 U.S.C. §1342, and the limits and conditions which restrict the discharge of an individual industrial plant are fixed in the permit after proceedings conducted under Section 402. Unless a plant has a permit, no effluent discharges are lawful.

The Act includes separate requirements for new plants and existing plants. Existing plants are required to achieve by 1977 effluent limitations requiring the application of "best practicable control technology currently available" (Section 301(b)(1)(A), 33 U.S.C. §1311(b)(1)(A)) and by 1983 effluent limitations requiring application of "best available technology economically achievable" including elimination of discharges if "technologically and economically achievable" (Section 301(b)(2)(A), 33 U.S.C. §1311(b)(2)(A)).

A new source must, from the time of startup, comply with any applicable "standard of performance" promulgated by EPA pursuant to Section 306 of the Act. 33 U.S.C. §1316. A "new source" is a facility the construction of which is commenced after publication of a proposed standard of performance applicable to it. Section 306(a)(2), 33 U.S.C. §1316(a)(2).^{1/}

The standard of performance for a new plant is to be --

"a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives including, where practicable, a standard permitting no discharge of pollutants." Section 306(a)(1), 33 U.S.C. §1316(a)(1).

EPA is required to establish standards of performance for 27 "categories of sources" listed in Section 306 of the Act. One of

^{1/} Modifications of existing facilities are not new sources. S. (Conf.) Rep. No. 92-1236, 92d Cong., 2d Sess, at 128-29 (1972) reprinted in Senate Committee on Public Works, A Legislative History of the Water Pollution Control Act Amendments of 1972, 93d Cong. 1st Sess. at 311-12 (Committee Print, 1973) (hereinafter "Legislative History").

those categories is "phosphate manufacturing." Section 306 (b) (1) (A), 33 U.S.C. §1316(b) (1) (A). EPA may "distinguish among classes, types, and sizes within categories of new sources" for the purpose of establishing the standards of performance. Section 306(b) (2), 33 U.S.C. §1316(b) (2). The "type of process employed" is a factor in subcategorization. Section 306(b) (2), 33 U.S.C. §1316(b) (2).

Among the factors which EPA must consider in establishing standards of performance are "the cost of achieving such effluent reduction and any non-water quality environmental impact and energy requirements." EPA is required to revise the standards "as technology and alternatives change." Section 306(b) (1) (B), 33 U.S.C. §1316(b) (1) (B).

Section 509 of the Act (33 U.S.C. §1369) provides for a method of judicial review of certain specific actions of EPA which is different from the normal review procedure under the Administrative Procedure Act. Section 509 provides that a special review by petition in the Courts of Appeals, rather than in the District Courts, shall apply to a specifically set out group of actions by EPA. Regulations under Section 306 establishing standards of performance are included in Section 509 and therefore review lies in the Courts of Appeals.

The Administrative Proceedings

In August 1973, EPA announced a public review procedure with respect to phosphate manufacturing industry standards of performance regulations. 38 Fed. Reg. 21201, August 6, 1973, App. 1011-1015. EPA's procedure in developing facts was to use a contractor

who surveyed an industry and made a report. The Contractor's Report on phosphates appears in the record. App. 1-200.

On September 7, 1973, EPA published a notice that it was proposing standards of performance for the phosphate manufacturing industry. 38 Fed. Reg. 24470, App. 1177-1183. Shortly thereafter, it released a Draft Development Document in which EPA's methodology was described and proposed findings and conclusions were made. App. 1016-1176. It also issued an Economic Analysis of the proposed regulation (a Draft Economic Analysis). App. 1184-1243.

The final regulations were published on February 20, 1974. 39 Fed. Reg. 6579, App. 1313-1319. Although not available until several weeks after the regulations were promulgated, EPA prepared a final Development Document, App. 1644-1800. EPA never published a final Economic Analysis of the impact of either its guidelines or new source standards on the industry.

Comments were invited at each stage in the proceedings and Petitioners in these cases filed extensive comments.

The Phosphate Industry

The phosphate category includes the production of elemental phosphorus and its derivative products other than phosphate fertilizer.

Elemental phosphorus production is estimated at 545,000 short tons by 10 plants located in Idaho, Montana, Tennessee, Florida and Alabama. Development Document, App. 1657 and 1661. Elemental

phosphorus is manufactured by the reduction of phosphate rock or ore by coke in very large electric furnaces, using silica as a flux. Production of elemental phosphorus is covered by Subpart A of EPA's regulations. App. 1316-17. Since phosphorus reacts violently with oxygen but is not reactive with water, water is used extensively in direct contact with phosphorus for heat transfer, for materials transfer, for protection from the atmosphere, and for purification. Development Document, App. 1659.

Most elemental phosphorus (over 87 percent) is used to manufacture phosphoric acid by the "dry process".^{1/} The remainder is either marketed directly or converted to chemicals such as phosphorous pentoxide, phosphorus pentasulfide, phosphorus trichloride, and phosphorus oxychloride, the major uses of which are as raw materials for the organic chemical industry. Development Document, App. 1659. These "phosphorus consuming" processes are governed by Subpart B of the regulations. App. 1317-18.

Dry process phosphoric acid (known as "furnace grade") is used in the food industry and for high grade fertilizers. Development Document, App. 1659. Phosphoric acid also is the basic raw material for the manufacture of products in the Phosphate Subcategory (Subpart C) of the regulations - sodium tripolyphosphate and calcium phosphate. App. 1318-19.

^{1/} The "wet process" is used to produce lower grade phosphoric acid, generally for use in low grade fertilizers.

Sodium tripolyphosphate, commonly referred to as STPP, is used in household laundry formulations. App. 1227. This is known as detergent or technical grade STPP. STPP is also manufactured in the United States as a human food additive. One nonfertilizer use for calcium phosphate manufactured in the United States is as an animal feed supplement (feed grade calcium phosphate). App. 1228. A much purer food grade calcium phosphate is manufactured for use as a dentifrice and for human consumption. App. 1229, 1234, 1662. Food grade sodium tripolyphosphate and calcium phosphate are subject to food grade purity specifications of the Food and Drug Administration.

The Standards of Performance

The standards of performance for new sources in the Phosphate Category prohibit the discharge of process waste water pollutants. 40 C.F.R. §§422.15 (elemental phosphorus), 422.25 (phosphoric acid, phosphorus pentoxide, phosphorus pentasulfide, phosphorus trichloride and phosphorus oxychloride), and 422.35 (sodium tripolyphosphate, and feed and food grade calcium phosphate).

A R G U M E N T

P A R T O N E

I

THE JUDICIAL REVIEW ROLE OF THE COURTS

These cases present a series of complex intertwined legal and technical issues for the Court's resolution. The complexities are due to the fact that issues of statutory construction are intermingled with the technical issues for each product arising from a separate factual record pertaining to that product.

The standard of review is that prescribed by Section 10(e) of the Administrative Procedure Act, now 5 U.S.C. §706:

"The reviewing court shall --

. . .

"(2) hold unlawful and set aside agency action, findings, and conclusions found to be --

"(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

. . .

"(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right . . ."

In carrying out a similar Congressionally mandated judicial review function respecting provisions of the Clean Air Act, as amended, where legal and technical issues were also intertwined, Judge Leventhal noted that:

"[T]he necessity to review agency decisions, if it is to be more than a meaningless exercise, requires enough steeping in technical matters to determine whether the agency 'has exercised a

reasoned discretion' We cannot substitute our judgment for that of the agency, but it is our duty to consider whether 'the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment' Ultimately, we believe, that the cause of a clean environment is best served by reasoned decision-making." (Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 402 (D.C. Cir. 1973) (emphasis added).)

To serve this judicial-review function, courts have obliged EPA to provide a statement of reasons and a rationale for its regulatory decisions, such that "the basis for . . . [its] decision should [will] appear clearly on the record, not in conclusory terms but in sufficient detail to permit prompt and effective review." Environmental Defense Fund v. Hardin, 428 F.2d 1093, 1100 (D.C. Cir. 1970). See also Dry Color Mfrs. Ass'n, Inc. v. Department of Labor, 486 F.2d 98, 105-107 (3d Cir. 1973); Kennecott Copper Corp. v. EPA, 462 F.2d 846 (D.C. Cir. 1972).

Petitioners will show in the discussion of the individual subcategories that EPA has failed to provide a reasoned basis for its regulations.

II

EPA'S METHODOLOGY DOES NOT COMPLY WITH THE REQUIREMENTS OF SECTION 306.

The new source standard of performance for the entire phosphate category is no discharge of process waste water pollutants. This requirement is the same as the requirements under the effluent guidelines. No discharge of process waste water is required by 1977 for

products in Subpart B (phosphate consuming subcategory) except phosphorus trichloride and phosphorus oxychloride and products in Subpart C (phosphate subcategory) except food grade calcium phosphate. The 1983 effluent guideline for elemental phosphorus, phosphorus trichloride, phosphorus oxychloride, and food grade calcium phosphate is no discharge of process waste water.

It is evident that the standards of performance for these products were based on the same analysis and same facts as the no-discharge effluent guidelines. EPA's two-page Development Document section specifically relating to the new source standards (App. 1786-87) explicitly states that the new source standards for all the products in question are "identical to the best available technology economically achievable." Development Document, App. 1787.^{1/}

The abatement costs for zero discharge for existing plants producing these products are stated in the Development Document; separate abatement costs are not given for new plants.^{2/} The Draft

^{1/} The quoted statement is accurate although EPA's prefatory remark (Development Document, App. 1787) that "[s]ince the best practicable control technology currently available effluent limitations guidelines [1977] for all of the chemicals considered in this study of phosphate category were no discharge of process water pollutants to navigable waters. . ." is clearly a misstatement. The 1977 or "best practicable" guidelines for phosphorus, phosphorus trichloride, phosphorus oxychloride, and food grade calcium phosphate do not require no discharge of process waste water pollutants. Development Document, App. 1769-72, 1774-76, 1778-9; Final Regulations, App. 1317-19. EPA apparently meant to refer to the 1983 guidelines based on the best available technology economically achievable, as it did at the end of the sentence, rather than to the 1977 guidelines based on best practicable control technology currently available.

^{2/} See Development Document, App. 1753-65.

Economic Analysis does not analyze the impact of the new source standards for these products on new construction.^{1/}

A. The Technology Bases for the Standards of Performance Are Not Available or Demonstrated.

The statutory standard for the new source requirements is "best available demonstrated control technology, processes, operating methods, or other alternatives." Section 306(a)(1). The Conference Report states that the standard of Section 306(a)(1) "is the same as the comparable provision of the Senate bill and the House amendment. . ."

S. (Conf.) Rep. No. 92-1236, 92d Cong., 2d Sess. at 127 (1972); Senate Committee on Public Works, A Legislative History of Water Pollution Control Act Amendments of 1972, 93d Cong., 1st Sess. at 310 (Committee Print, 1973) (hereinafter "Legislative History").

The House report states:

"It will be sufficient, for the purpose of setting the level of control under available technology, that there be one operating facility which demonstrates that the level can be achieved or that there is sufficient information and data from a relevant pilot plant or semi-works plant to provide the needed economic and technical justification for such a new source." H.R. Rep. No. 92-911, 92d Cong., 2d Sess. at 111 (1972); Legislative History at 798.

The Senate report describes the standard as follows:

"As used in this section, the term 'available control technology' is intended to direct the Administrator to examine the degree of effluent reduction that has been or can be achieved through the application of technology which is

^{1/} See Draft Economic Analysis, App. 1184-1243.

available or normally can be made available. This does not mean that the technology must be in actual, routine use somewhere. Rather, it means that the technology must be available at a cost and at a time which the Administrator determines to be reasonable." S. Rep. No. 92-414, 92d Cong., 1st Sess. at 58 (1971); Legislative History at 1476.

In describing the standard for the 1983 effluent guideline, which does not explicitly contain the word "demonstrated," the Senate Committee report emphasized that "available" means that the "technology has been adequately demonstrated if not routinely applied." S. Rep. No. 92-414, 92d Cong., 1st Sess., at 52 (1971); Legislative History at 1470.^{1/}

These statements outline the determinations which EPA is required to make. The technology may be in use at just one plant in the industry, or none, if EPA has evidence establishing that it is "demonstrated" to be viable for new plants in the relevant industry. However, regardless of the basis for the standard, EPA must identify the technology underlying the new source standard and provide the rationale for its conclusions that the technology is "available" and

^{1/} No discharge of pollutants may be imposed as a new source standard "where practicable." Section 306(a)(1). The legislative history indicates that a particularly rigorous analysis is required in such instances. Representative Wright, speaking for the House conferees stated:

"The managers expect the Administrator to be thorough * * * [as to] the test of practicability before any standard of performance is promulgated with the requirement for no discharge." 118 Cong. Rec. H9128 (daily ed. Oct. 4, 1972); Legislative History at 260.

"demonstrated."^{1/} EPA cannot blindly base its standards on observation (or mis-observation) of existing plants or mere assertions as to the applicability of untried technologies. EPA must make a reasoned technical, economic, and engineering decision.

EPA's methodology is wholly inconsistent with these requirements. As noted above, EPA's standards of performance for new sources are explicitly based on its findings and rationale in establishing the effluent guidelines under Section 304(b). EPA's methodology, in fact, in developing the guidelines for the phosphate industry was to obtain limited data on a small minority of plants: to select, usually, one plant as "exemplary"; and to base the single number guidelines on the alleged performance of that plant. EPA's analysis of the technology applied by its exemplary plants generally consists of terse, ambiguous identification of a generic technology.

In many instances, no exemplary plant or even literature is cited by EPA to support its conclusory statements on cost. EPA's zero discharge effluent guidelines and, therefore, its new source

^{1/} This fundamental obligation is reinforced by Section 304(c) which provides that EPA shall publish in the Federal Register and otherwise make available:

"information on the processes, procedures, or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under Section 306 of this Act. Such information shall include technical and other data, including costs, as are available on alternative methods of elimination or reduction of the discharge of pollutants."

EPA states that the Development Document constitutes such information. Preamble to Proposed Regulations, 38 Fed. Reg. 24471, App. 1178.

standards for phosphorus trichloride, phosphorus oxychloride, phosphorus pentasulfide, food grade sodium tripolyphosphate, and food grade calcium phosphate plants is based on suppositions as to technology without any pretense that zero discharge is achieved, or even being considered, by any existing plant.

B. EPA's Methodology Precluded the Establishment of Meaningful Industry Subcategories.

Subcategorization is a critical step in establishing new source standards. In Section 306(b)(1)(A), Congress listed a minimum of 27 such categories for use in establishing new source standards of performance; one of these major industrial categories is "phosphate chemicals manufacturing." But Congress recognized in Section 306 that it would not be possible to establish one uniform standard of performance for each of these major industrial categories. Accordingly, Congress specifically and emphatically provided in Section 306(b)(2) that "[t]he Administrator may distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such [new source] standards [of performance] * * *." The Congress expected EPA's approach to subcategorization to be rigorous and that "the number of subclasses might be extensive." 118 Cong. Rec. H9128 (daily ed. Oct. 4, 1972); Legislative History at 259.

EPA's reliance, at best, on one or a few "exemplary" plants in each product subcategory without analysis of a representative cross-section of the other plants, and its habit of postulating the applicability of advanced technologies to an entire subcategory

without reference to data at all, wholly precluded the thorough consideration of subcategorization mandated by the Congress.

Had EPA, as the Act requires, identified the technologies on which it relied and analyzed them in light of data on the subcategory to which they were being applied, the need for additional subcategorization might have been apparent. For example, EPA's 1977 and 1983 "no discharge" guidelines, and, hence, its new source standard for sodium tripolyphosphate fails to take into account that there are two grades of sodium tripolyphosphate. One is a technical or detergent grade, used in household laundry formulations, while the other is a much more expensive and purer food grade sodium tripolyphosphate, used as a human food additive and, consequently, subject to the stringent food grade purity specifications of the Food and Drug Administration (FDA).^{1/} Similarly, the abatement potential for an elemental phosphorus plant is dependent on geographical location, a factor which EPA wholly ignored.^{2/}

C. EPA Did Not Take Cost Into Account.

EPA is explicitly required to take "into consideration the cost of achieving such effluent reduction" required by the new source standards. Section 306(b)(1)(B). Neither the cost estimates in the Development Document nor the Draft Economic Analysis relate costs to the construction of new plants.^{3/} In fact, to this date, there has not

^{1/} See pages 48-52, infra.

^{2/} See pages 23-30, infra.

^{3/} See, supra, at pages 13-14.

been released a Final Economic Analysis discussing the impact the cost of meeting the guidelines much less the new source standards will have on the phosphate manufacturing industry.

It is, therefore, clear that the Agency has not even considered the "cost of achieving [the] effluent reduction" required by the new source standards of performance (Section 306(b)(1)(B)) much less fulfilled its related obligation of providing "information * * * on costs * * * [of] alternative methods of elimination or reduction of the discharge of pollutants * * * " (Section 304(c)).

Its abatement costs for existing plants are conclusions without explanation, patently incomplete in many respects, and out of date. For example, EPA's fuel costs were developed in mid-1973, well before the Arab oil embargo and the domestic oil shortages of the winter of 1973-74 pushed oil and other fuel prices to levels double and, in some cases, triple those of six months earlier.

III

EPA'S DEFINITION OF PROCESS WASTE WATER IS ARBITRARY AND CAPRICIOUS

The new source standards for the phosphate industry forbid to the discharge of process waste water pollutants or the discharge of pollutants in process waste waters. EPA, for each phosphate industry subcategory, promulgated by reference the following definitions of "process waste water" and "process waste water pollutants":

"The term 'process waste water' means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product or waste product."

"The term 'process waste water pollutants' means pollutants present in process waste water." (40 C.F.R. §§422.11, 422.21 and 422.31, App. 1317-18, incorporating 40 C.F.R. §401.11(q) and (r).)

This definition was adopted by EPA in the abstract for all industry categories without consideration of facts relevant to any industry category. 39 Fed. Reg. 4531 (February 4, 1974).^{1/} Anything that comes into contact with a raw material, an intermediate, a product, a by-product, or a waste material would appear to be a process waste water or a process waste water pollutant under EPA's all-encompassing, abstract and unsupported definition of "process waste water" and "process waste water pollutants."

The Development Document for the phosphate industry is a vague and contradictory publication as to the means of controlling or eliminating process waste water discharges as thus defined. It is clearly evident that the phosphate industry was not evaluated with this definition as the ground rule. Rather the abstract definition was superimposed on the specific new source standards and is patently arbitrary in the following respects:

(1) EPA states that there are "leaks and spills in all industrial chemical operations," that "they are not going to be

^{1/} The arbitrary application of this definition to the effluent guidelines is discussed in the brief in No. 74-1687 at pages 38-41.

eliminated" and that they "can be minimized and contained."

Development Document, App. 1729. EPA's analyses of control of this inevitable occurrence in the context of particular phosphate production operations is, at best, superficial and most often non-existent. For example, EPA cites the Lawrence, Kansas plant of FMC Corporation (plant No. 119 under EPA's "code system") as supporting its no-discharge guidelines and new source standard for sodium tripolyphosphate plants (40 C.F.R. §§422.32, 422.33, 422.35). Development Document, App. 1777. But as the information upon which EPA based that conclusion makes clear, minor leaks and spills do occur, were not considered process wastes by the plant, and are discharged. App. 524.

(2) All phosphorus and phosphate production processes involve heat and large amounts of non-contact cooling water are used and discharged. For example, the process waste water flow at a phosphorus oxychloride (POCl_3) plant as found by EPA is 600 gallons per ton of product but cooling water usage is 12,000 gallons per ton. Development Document, Table 9, App. 1712.

By definition and design, non-contact cooling water is separated from process materials. Therefore, "except for leaks, non-contact [cooling] water has no waste pickup." Development Document, App. 1728 (emphasis added). Such leaks are inevitable and the result is a high volume of effluent with extremely low levels of contaminants. EPA, by virtue of its abstract definitions and without discussion of the means, blindly and arbitrarily says that "any cooling water that picks up related pollutants from leaks becomes process waste water."

Preamble to Proposed Regulations, App. 1181.

(3) The phosphate industry is characterized by handling of finely divided solid products and, despite substantial air quality control programs, the collection of dusts on buildings and plant grounds. Development Document, App. 1731. Under EPA's definition rainwater runoff that picks up these materials could be process water. Yet, EPA states:

"The very practice of process water segregation discussed previously has led to the direct discharge of stormwater without treatment. Little is known from a quantitative standpoint about the severity of this problem in the phosphates segment of the industry, or to what extent containment and treatment of stormwater is required." (Development Document, App. 1731.)

The difficulty with the new source standards, given EPA's definition of process water is a very real one. These incidental waste water streams are inevitable, and provision simply must be made to take account of them. The "technology" underlying EPA's guidelines and new source standards is non-existent with respect to these streams. There is no magic solution to these intractable problems even though the quantities of pollutants involved are commonly small.

EPA has taken waste water flows which are not related directly to the water used in production, and, by myopic evaluation of the circumstances involved, has created a major problem. No one cares to be placed in a position where a regulation must inevitably be violated. Petitioners certainly do not; this petition for review provides the only recourse.

P A R T T W O

I

THE NEW SOURCE STANDARD FOR ELEMENTAL PHOSPHORUS IS NOT SUPPORTED BY THE RECORD

A. The New Source Standard is Based on the Performance of One Plant.

The portion of the Development Document, Section X, which states EPA's rationale for the 1983 effluent guideline and, therefore, for the new source standard for elemental phosphorus plants squarely bases the no discharge requirement on the performance of one plant:

"At Plant 181 [Hooker Chemical at Columbia, Tennessee] the lime-treated water from all sources is clarified in settling ponds, and the clarified water is held in re-use water supply ponds. There is total recycle of all water at this plant, with zero discharge. Because phosphates and fluorides are removed by lime treatment and sedimentation, there is no requirement to bleed off water for the control of dissolved solids * * *. It is therefore recommended that best available control technology economically achievable for phosphorus production be no discharge of process waste water pollutants to navigable waters." App. 1781-82 (emphasis added and paragraphing omitted). 1/

1/ The challenge to the 1983 effluent guideline is in the brief No. 74-1687, at pages . EPA in a general discussion theorizes that a Tennessee Valley Authority plant at Muscle Shoals, Alabama, utilizes technology that might "enable" it to achieve no discharge. Development Document, App. 1770. That plant, however, is not cited as a basis for the 1983 effluent guideline or, hence, the new source standard. EPA's statements of the basis for zero discharge exclude any discussion of the TVA plant. App. 1781-82. EPA did not visit or obtain data on the plant. Its discussion of TVA apparently is based on literature. See Contractor's Report, App. 128. Commentors and ESWQIAC pointed out that the literature does not support a concept of zero discharge. App. 912, 945, 949, 953, 971. The literature (Reference number 5 in the Development Document bibliography, App. 1742) was not cited in the Development Document and was not designated for inclusion in the record.

B. EPA's Basis For The No Discharge New Source
Standard Is Deletion of The Discussion of
Climatic Conditions Which Prevent Complete Recycle

The paragraph quoted just above in which EPA states the basis for zero discharge requirement for elemental phosphorus plants is also found, without a single word changed, in its discussion of the 1977 effluent guideline in Section X of the Development Document, App. 1770. EPA did not impose zero discharge for 1977, stating in the same Section IX of the Development Document:

"In areas of the country where very severe and extended cold weather prevails, total recycle of process water becomes difficult for two reasons:

- "1. The return water piping and pumping must be protected against freezing. However, technology such as buried water mains and enclosed, heating pumping stations has been amply demonstrated in the chemical industry and in water supply operations.
- "2. The settling ponds may freeze. In a total recycle system, this circumstance would prevent the required water from being supplied back to the process. If auxiliary fresh water supply were provided to uncouple the process from frequent climatic perturbations, the pond system would have to consist of sufficient holding capacity to prevent temporary overflow and would have to contain sufficient evaporative capacity to prevent long-term accumulation of water." App. 1771 (emphasis added).

The effect of severe climates which EPA acknowledges in connection with the 1977 effluent guideline is very real. The point was made from the outset, including by Monsanto in information provided to the contractor analyzing the potential for total recycle at

the Soda Springs plant and emphasizing that technology has not been developed to operate a complete recycle under "severe winter conditions" with "temperatures to 40°F below zero." App. 630; see App. 629, 633, and 882.

The possibility mentioned in the discussion of the 1977 standard of using fresh water to "uncouple" a frozen system during the winter rests, in EPA's own analysis, on (1) "sufficient holding capacity to prevent temporary pond overflow" and (2) "sufficient evaporative capacity to prevent long-term accumulation of water." App. 1771. Therefore, this possible solution does not rest on a technology that might be "available" for new plants but not "practicable" for existing plants. It rests on the physical facts of land availability for increasingly large holding ponds and a climate which results in sufficient evaporation from ponds to eliminate the excess fresh water to uncouple frozen pond systems. EPA states that the controlling factor in location of phosphorus plants is proximity to the ore source and that one of the major phosphate ore regions is in Idaho and Montana. Development Document, App. 1657. The information on the Monsanto Soda Springs, Idaho, plant establishes that the severe climate in which it operates does not allow those conditions to be met and prevents total recycle.

EPA, in imposing for new elemental phosphorus plants the no discharge requirement which it abandoned for 1977, did not explain how those obstacles could be overcome. In short, new source no discharge requirement is not based on a reasoned analysis of the technical and

engineering problems of new plants. EPA's "analysis" was by deletion - it simply excised a substantial technical and engineering problem by the stroke of an editor's pen.

C. The Record Fails to Establish That The Unidentified Technology Applied At the Exemplary Plant is Available To New Phosphorus Plants.

The technology applied at the Hooker Columbia plant is cursorily termed "total recycle of all water at this plant" with the statement that because "phosphates and fluorides are removed by lime treatment and sedimentation, there is no requirement to bleed off water [to waste effluent] for the control of dissolved solids." App. 1781 (emphasis added). There is no other significant discussion or analysis in the Development Document of technology for zero discharge applied at the Hooker plant or its applicability to new plants. See App. 1697-1704 (Section V-Water Use and Waste Characterization) and App. 1734-42 (Section VII-Control and Treatment Technology). In fact, in each instance where control technology for phosphorus plants is discussed and the Hooker plant (No. 181) cited, the exemplary Monsanto plants (Nos. 028 and 159) are cited as applying the same technology (lime neutralization and sedimentation) without achieving zero discharge.^{1/} App. 1734, 1736, and 1740.

Neutralization and sedimentation will improve, but not eliminate, effluent. An EPA analysis of the means by which Hooker

^{1/} The Development Document does differentiate among techniques used by Hooker and the Monsanto plants to achieve no-discharge of effluent containing elemental phosphorus ("phossy water"). App. 1743-44.

achieves "total recycle" is wholly lacking.

In fact, the record establishes that the Hooker plant does not have total recycle of all effluent from the process back into the process. It recycles 80 to 95 percent of its effluent. App. 404.^{1/} The two Monsanto plants also have substantial recycle. App. 617-19, 696-98, and 944-45.

Therefore, the achievement of zero discharge at the Hooker plant (other than during heavy rainfall periods)^{2/} is not due to application of recycle technology. It is achieved by virtue of water losses from the "multiple pond arrangement" (App. 378) of eight separate ponds (App. 392).

EPA did not measure flows at the Hooker plant to determine the quantity of water which is lost from the pond system. App. 394-400. It did not assess whether these losses were due to evaporation or to percolation (seepage to ground water). EPA recognized that percolation "may create an environmental uncertainty" requiring impervious pond linings. Preamble to Proposed Regulations, App. 1179. Yet, it did not assess the effect of such requirements on the ability to prevent all effluent discharges. The Agency did not consider whether precipitation rates at phosphorus producing centers in humid southern

^{1/} Lime treatment will not remove chlorides. App. 944. On total recycle of all waters, chloride concentrations should increase to their limits of solubility. The data on the Hooker plant show chlorides are being concentrated from 3 ppm to 400 ppm (App. 397, 398, 399) indicating a high degree of recycle, but not total recycle since the limits of solubility of chlorides is greater than 40,000 ppm.

^{2/} See infra pages 28-29.

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^{2/} See infra pages 28-29.

at least for catastrophic rains is incredible since it concludes in its discussion of the exemplary Hooker plant:

"Under conditions of abnormally high rainfall which would exceed the capacity of the pond system, the only overflow would be from the final re-use water supply ponds, thereby minimizing the quantities of pollutants even occasionally discharged." (Development Document, App. 1781).

That is hardly zero discharge.

EPA's assertion that lesser rains can be contained without discharge because the Hooker system runs at a "water deficit" (Development Document, App. 1781) must be rejected out of hand. EPA did not even measure flows at the Hooker plant to determine what amount of rainwater, if any, can be consumed in the process by virtue of the asserted fact that more water is consumed in the process than is discharged. App. 394-400. Hooker flatly refuted EPA's speculation from the first visit of EPA's contractor, with an offer to EPA to provide whatever additional information the Agency might desire to verify the fact that excess rainfall is discharged. App. 408 and 1271.

The failure to allow for rainfall is as arbitrary for new plants as for existing plants. Climate is a fact of life that cannot be changed for new or existing plants.

E. EPA's Cost Estimates Are Patently Inadequate

Cost is a factor which EPA must consider under Section 306(b)(1)(B). EPA did not even estimate the cost of zero discharge for new plants. EPA estimated the capital cost of total recycle

for existing plants at \$500,000. App. 1755. It is clear from the Development Document that the cost covers only the "plumbing" required at an existing plant to return water from the settling ponds to the production facilities. App. 1757. EPA states that the cost does not include measures to deal with "severe freezing problems" which it concedes as major obstacles to recycle (App. 1757) and it is evident that recycle of rainwater is not accounted for by EPA. Nor, of course, did EPA estimate the cost of settling ponds (land, linings, etc.) or other abatement measures that would be necessary at a new plant.

Commentors provided EPA with estimates of attempting to achieve zero discharge at an existing plant showing that EPA's figures were low by almost a factor of five. App. 1361 and 1368. The Effluent Standards and Water Quality Information Advisory Committee (an independent scientific body established by Section 515 of the Act) pointed out that the cost estimate was based on a simplistic conception of recycle technology and was without "breakdown, justification or defense." App. 913.

II

THE NEW SOURCE STANDARD FOR PHOSPHORUS TRICHLORIDE AND PHOSPHORUS OXYCHLORIDE IS INVALID

Phosphorus trichloride (PCl_3) and phosphorus oxychloride (POCl_3) are in Subpart B (Phosphorus Consuming Subcategory) of the regulations. The new source standard for all products in Subpart B

is "no discharge of process waste water pollutants." 40 C.F.R. §422.25, App. 1318. There are no exceptions. The no-discharge 1983 effluent guideline for phosphorus trichloride and oxychloride plants is covered in the brief in No. 74-1687, at pages 53-64.

A. There Is No Basis In The Record For The Agency's Conclusion That The Technology Is Available To Achieve No Discharge Of Process Waste Water

The principal source of waste water in a phosphorus trichloride or phosphorus oxychloride plant is effluent from "tail gas" scrubbing of PCl_3 or POCl_3 vapors from the reaction and distillation vessels (PCl_3 and POCl_3 are very volatile and vaporize at low temperatures). There are also effluents from scrubbing vapors from product storage tanks and product transfer operations and from cleaning of tank cars and returnable product shipping containers. Development Document, App. 1707-11; App. 309, 474. The standard process water flow found by the Agency for phosphorus trichloride plants was 1200 gallons per ton of product; and for phosphorus oxychloride plants, 600 gallons per ton of product. Development Document, Table 10, App. 1712.

EPA hypothesized two schemes for achieving no discharge of process waste water pollutants to achieve the 1983 effluent guideline and, hence, the new source standard. The heart of the first theory is to reduce waste water flow by 90 percent by use of refrigerated condensers in addition to water cooled condensers used in the standard process. The remaining 10 percent of the effluent,

according to EPA, can be evaporated. Development Document, App. 1782-83.

EPA concedes that a "rigorous economic evaluation" might force phosphorus trichloride and oxychloride producers to another approach. Development Document, App. 1784.^{1/} Therefore, it predicted that no attempt to reduce wastewater flow by 90 percent would be made and, instead, that the entire waste flow would be evaporated. Development Document, App. 1784.

1. No Plant Has Achieved Or Contemplates
Achievement of Zero Discharge

Zero discharge technology has not been demonstrated in the industry. EPA visited two phosphorus trichloride and oxychloride plants: Hooker at Niagara Falls, New York (No. 147) and FMC Corporation at Nitro, West Virginia (No. 037). Nothing in the record on these plants even relates to achievement of zero discharge.

EPA cites the FMC plant as employing refrigerated condensers in its phosphorus oxychloride unit. Development Document, App. 1782. The basis for the Agency's description of the FMC plant is not clear; nowhere in the information in the record on the FMC plant is its use of refrigerated condensers mentioned much less described. See App. 474-86.

However, even assuming that the plant, in fact, does employ refrigerated condensers, the Agency's implication that this provides

^{1/} In fact, so convinced was EPA that economics would dictate against use of refrigerated condensers, it did not even estimate their cost. Development Document, App. 1757.

a basis for its view of available technology is erroneous and misleading. Whatever its basis, EPA's own description of the FMC process, which uses the air-oxidation rather than the standard POCl_3 process, makes it absolutely clear that refrigerated condensers are not abatement technology in the phosphorus oxychloride process and not used at all in the phosphorus trichloride unit at the FMC plant. Development Document, App. 1681.^{1/} There is no suggestion by EPA that the new source standard is based on use of the air-oxidation process.

In fact, the data cited by the Agency for the FMC plant plainly indicate that refrigerated condensers are not an attractive technology for achieving the 90 percent flow reduction postulated by EPA. The flow rate from the wet scrubbers employed at the Hooker plant is given by EPA as 600 gallons per ton of POCl_3 produced. Development Document, App. 1708.^{2/} The flow given for effluent from

^{1/} In the FMC process, according to EPA, phosphorus oxychloride is produced by oxidation of phosphorus trichloride with dried air. The "significant difference" between the standard and the air-oxidation process is that non-condensable gases (nitrogen and excess oxygen) are involved. App. 1681. The amount of POCl_3 vapor lost through the condensers is a function of both the vapor pressure of POCl_3 and the amount of inert gas available to carry the vapor through to the vent gas scrubber. In the case of the production of POCl_3 by the use of air, the amount of nitrogen present will be high, necessitating the use of refrigerated condensers to keep the percent of POCl_3 vapor in the large mass of inert gas small and POCl_3 losses low. As indicated by EPA's diagram for the FMC process, wet scrubbers are employed, as in the standard process, to reduce emissions of tail gas from the refrigerated condenser. Development Document, Figure 9, App. 1683 and 1710.

^{2/} This is the total flow from all POCl_3 produced. Effluent flow for just the scrubbers is not separately given.

scrubbing after refrigerated condensation at FMC is 430 gallons per ton of POCl_3 produced (Development Document, App. 1710), or, at the maximum, less than a 30 percent reduction as compared to the flow at the Hooker plant. Development Document, App. 1710. Even assuming that refrigerated condensers are employed by FMC and that the difference in flows is attributable to the refrigerated condensers, a 30 percent reduction is a far cry from the 90 percent postulated by EPA.

2. EPA Did Not Analyze The Engineering Aspects Of In-Plant Controls and Evaporation.

EPA's analysis of the application of evaporation and refrigerated condenser technology, for which it had no data from actual application, to the phosphorus trichloride and oxychloride industry is simplistic, verging on nonexistence. EPA's description of the technology contemplated for evaporation is the phrase "single-effect evaporation." Development Document, App. 1783. Its analysis of the availability of evaporation consists of the following statement:

"Evaporation is a technology, of course, that is aptly demonstrated throughout the chemicals process industry (although not extensively for the sole purpose of waste treatment), and as such meets the requirements of being currently available." Development Document, App. 1750 (emphasis added).

The implication that evaporation is a straight-forward, single technology that is routinely applied, with only a low-key paranthetical qualification, is more than misleading. It is dead wrong and flatly contradicted by the Agency's own concessions in

the Development Document for the Major Inorganics Products Segment of the Inorganic Chemicals Manufacturing Point Source Category, EPA-440/1-74-007-a (March 1974) [hereinafter "Inorganic Chemicals Development Document"].

The Inorganic Chemicals Development Document contains a statement on the availability of evaporation technology similar to that in the phosphate document:

"The evaporation process is well known and well established in the inorganic chemical industry." Inorganic Chemicals Development Document, at 225.

However, in the same discussion (after running quickly over process uses of evaporation and desalination of seawater without a single citation or reference to a specific application), the Agency corrects its sweeping and inaccurate statement:

"Evaporation is a relatively expensive operation. To evaporate one kg of water, approximately 550 kg-calories of energy is required and the capital cost for the evaporation equipment is not low. For these reasons industrial use of evaporation in treating wastewater has been minimal." Inorganic Chemicals Development Document, at 225 (emphasis added). 1/

EPA's failure to qualify its bold and inaccurate statement on evaporation in the phosphate industry Development Document as it did in that for inorganics chemicals is inexcusable. That omission is particularly disturbing and inexplicable since the same contractor (General Technologies) was retained by EPA for the two industries.

1/ Also, it concedes elsewhere that the two "high energy technologies," evaporation and drying, "are now rarely used." Inorganic Chemicals Development Document, at 229.

It is also abundantly clear from the inorganic chemical EPA publication that "evaporation" is not even in theory a single technology. It is not simply a matter of putting pots of effluent over a burner.

The Agency simply has provided no basis for a conclusion that the evaporative technology, whatever it may be, is "available." It has not considered the problem of fouling of equipment which has plagued even experiments in partial evaporation for purposes of desalination. It ignored the massive design problems arising from the fact that typical effluents from PCl_3 and POCl_3 production are very dilute even compared to sea water. There are no pilot studies, no citations to evaporation in other industries, no discussion of possible technology transfer and not even citations to supporting literature.

The record is even more sparse with respect to refrigerated condensers. EPA's "analysis" of the availability of the technology consists of conclusory statements that they are "standard items". Development Document, App. 1760. There is nothing, not even a literature citation, supporting the contention that refrigerated condensers for use in effluent abatement are "standard" for PCl_3 plants, for POCl_3 plants using the standard process or POCl_3 plants (such as FMC) using the non-standard air-oxidation process (see page 33, note 1, supra).

There is an additional deficiency in EPA's analysis.

Refrigerated condensers, by lowering the temperature of the product PCl_3 or POCl_3 , only reduce the amount of PCl_3 and POCl_3 vapor potentially lost to the atmosphere unless scrubbed. Development Document, App. 1751.

EPA, somehow, must make the leap from an asserted (without support^{1/}) 90 percent reduction in vapor emissions to a 90 percent reduction in effluent flow from the scrubber. EPA tries to bridge this gap with the completely conclusory statement: "Tail-gas scrubbers should be very much smaller and should require much lower water flow rates." Development Document, App. 1783. It is an elementary fact about wet scrubbers that flow rates are not contingent solely upon pounds of pollutants to be removed. Concentrations of PCl_3 and POCl_3 vapors, gas-flow rates and other factors would be critical to a determination of what, if any, effluent flow reduction could be achieved by installation of refrigerated condensers.^{2/} EPA completely

^{1/} EPA's analysis of the quantitative reduction in PCl_3 and POCl_3 vapor losses consists of stating that they would be "drastically reduced[d]," and reduced by an "order-of-magnitude or greater," such that a "reasonable expectation is that the PCl_3 vapor (and mist) losses could be cut to 10 percent of present values." Development Document, App. 1750 and 1782. There is nothing in the record or even a meaningful technical analysis to support EPA's bare conclusions on vapor losses.

^{2/} EPA's off-hand suggestion, which it abandons in later discussions, that refrigerated condensers might be substituted for scrubbers (Development Document, App. 1782) would depend not only on the efficiency of the condensers, which EPA inadequately dealt with, but on whether an acceptable (occupational safety and health and air regulations) emission rates could be attained, an area which EPA did not explore at all.

sluffed over this central point.

B. EPA Has Failed To Consider Energy and Non-Water Quality Environmental Impact

1. EPA's Estimates of Energy Consumption Are Understated and Deceptive.

Among the factors which EPA must consider in establishing new source standards are "non-water quality environmental impact and energy requirements." Section 306(b)(1)(B). The Congress made it exceptionally clear that energy use in water pollution abatement was a factor to be taken with dead seriousness by the Agency. E.g., 118 Cong. Rec. H9131-32 (daily ed. Oct. 4, 1972), Legislative History, at 269.

The Congress' foresight in ordering EPA to "consider the full impact of the energy crisis facing the United States" (118 Cong. Rec. H9131 (daily ed. Oct. 4, 1972), Legislative History at 269) has been demonstrated by the events of the last year. The Agency's insensitivity to the Congressional mandate is demonstrated by the standards of performance for phosphorus trichloride and oxychloride.

The Agency recognized, as it had to, the high energy consumption of evaporation and refrigerated condensers. Development Document, App. 1750, 1760 and 1766. EPA's sole grudging nod to energy consumption is to note that a single effect evaporator (which it sets forth as the technology model) consumes 1000 BTU per pound of water evaporated and that the energy requirements to achieve no

discharge would be 293 kilowatt hours per 1000 kilograms of phosphorus trichloride produced and 146 kilowatt hours per 1000 kilograms of phosphorus oxychloride produced. Development Document, App. 1765 and 1767.

EPA has not provided any analysis of the design criteria or other information which supports its estimate of energy consumption. However, apart from that fatal defect, its estimate of electricity to be consumed "for the proposed treatment technologies" (Development Document, App. 1766) merits close consideration.

EPA has proposed either a 90 percent reduction in effluent flow by use of refrigerated condensers and evaporation of the remaining effluent or evaporation of the entire flow. EPA acknowledged that the "power requirement for a refrigeration condenser would be moderately high." Development Document, App. 1760. Yet, EPA's estimate of electricity consumption is based on evaporation of 10 percent of the flow found by EPA with no allowance for energy consumed by the refrigerated condenser.^{1/} EPA's failure to indicate in any way that its estimate was partial is deceptive and verging on intellectual dishonesty.

Even EPA's figures demonstrate the major role which energy considerations should have taken, but did not, in the rulemaking process. By standard engineering calculations (and not even factoring energy requirements up to account for boiler inefficiencies), 6.95

^{1/} The standard engineering calculations establishing this point are given in Appendix C.

million kilowatt hours per year required for a 65 ton/day PCl_3 plant would be equivalent to 237 million standard cubic feet of gas or 165,900 gallons of oil. For coal, it would be 880 tons. For a 50 ton/day POCl_3 plant, the 2.66 million kilowatt hours per year derived from EPA's figures would be equivalent to 63,910 gallons of fuel oil, 91.3 million standard cubic feet of gas, or 338 tons of coal.

This is only one-tenth of the fuel required to evaporate the entire effluent by the alternative technology proposed by EPA. While EPA failed inexplicably to estimate energy for refrigerated condensers (if technologically feasible), the energy use likely would increase EPA's partial evaporation requirements by a factor of four or five.

EPA's refusal to grapple with energy extended beyond deceptive estimates:

"It was stated that the evaporation of PCl_3 and POCl_3 process waste waters would require an excessive amount of energy.

"The 1983 limitations [and the new source standards] for the manufacture of PCl_3 and POCl_3 are no discharge of process waste water pollutants which can be accomplished by maximum waste water recycle and evaporation of the blowdown. The Agency believes that sufficient time exists for each plant to be examined by the industry in order to minimize water usage, maximize solar evaporation and thus minimize power usage." Preamble to Final Regulations, App. 1315.

In addition to being unable to describe correctly its technology model, the Agency declined, for good reason, to deny that energy requirements were not justified. Instead, it engaged in pipe dreams about solar evaporation in the future, hardly a reasoned basis for a standard of performance applicable to PCl_3 or POCl_3 plants built today.

2. EPA's Estimate of Costs is Incomplete and Inadequate.

EPA did not provide separate cost estimates for new plants. EPA did not even estimate the cost of achieving zero discharge at existing plants through use of refrigerated condensers.^{1/} Therefore, since cost is a mandatory consideration under Section 306, EPA has not fulfilled its statutory obligation and that technological model cannot support EPA's regulation.

Its cost estimates for total evaporation at existing plants are unexplained, unsupported and contradictory. For example, in one instance, EPA states that the cost of total evaporation would be \$7.35 per ton (Development Document, App. 1784); in another \$1.40 for PCl_3 plants and \$1.25 for POCl_3 plants (Development Document, App. 1755).^{2/}

Since EPA did not include its cost calculations, it is unclear whether it used its deceptively partial energy estimates. Equally disturbing, and incredible, is the fact that EPA included

^{1/} It "assumed that refrigerated condensers proved less economical than larger evaporators." Development Document, App. 1757.

^{2/} Dollars per metric ton (1000 kilograms) are converted to dollars per English ton by multiplying the former by .907. Development Document, App. 1800

the June, 1973, operating and maintenance cost (which is in large part energy) of its contractor even though energy costs have doubled and, in some cases, tripled since then. Compare Development Document, App. 1783-84 with Contractor's Report, App. 146-47.

3. The Benefits to Be Achieved Are Wholly Out Of Proportion to Cost, Energy and Non-Water Quality Environmental Debits

The effluent consequences of zero discharge can be assessed by comparing the zero discharge requirement to the allowable average daily discharges under the 1977 effluent guideline.^{1/} Using a combined 65 ton per day PCl_3 and 50 ton per day PCl_3 plant for purposes of illustration, the 1977 guideline would permit only 106 pounds per day of suspended solids (less than six standard bucketfuls as compacted dry material), 121 pounds of phosphates (analyzed as phosphorus)^{2/} and .0065 pounds per day arsenic (or 23 pounds per year).

The cost of achieving the minimal reduction from these levels to zero discharge is out of proportion to any conceivable benefit. Using EPA's \$7.35 per ton cost figure (Development Document, App. 1784), the annual cost would be over three million dollars or \$2.50 for each pound of total suspended solids, phosphates, and arsenic removed.

^{1/} 40 C.F.R. §422.22(b) and (c), App. 1318.

^{2/} The phosphate content may be expressed on the basis of analytical techniques measuring the phosphorus ion. This analytical method is used for the 1977 effluent guideline.

The result of this excessive cost and wastage of energy would be the creation of a solid waste problem. The Congress purposely wrote into the 1972 Act the sensible principle that it would be "foolhardy to credit one environmental account and debit another by the same action". 118 Cong. Rec. H9117 (daily ed. Oct. 4, 1972), Legislative History, at 232. Yet, this is precisely what EPA has done.

Using EPA's electricity estimates scaled up to total evaporation and without increasing energy needs to account for inefficiencies, 12,180 tons of coal would be required annually to evaporate at the hypothetical 65 daily ton PCl_3 and 50 daily ton POCl_3 plant. If the coal were 3.5 percent sulfur and 8 percent ash content, 1.7 million pounds of sulfur oxides would be emitted and nearly 975 tons of ash would either be emitted or disposed of as solid waste after precipitation. The pollutants removed from effluent would be transformed into a solid, largely soluble landfill problem.^{1/}

^{1/} EPA's total lack of concern about non-water quality impact is demonstrated with complete finality by its treatment of wastes from cleaning of returnable product containers. The wastes from this operation are negligible compared to effluent from tail gas scrubbing. Yet, EPA in its headlong rush to zero proposed that shipping practices be changed and that disposable containers be used in the future. Development Document, App. 1782. Since the shipping containers are not described in the record, one cannot even speculate as to the size of the mountain of non-reusable containers compared to the molehill of effluent pollutant discharges saved.

III
THE NEW SOURCE STANDARD FOR
PHOSPHORUS PENTASULFIDE PLANTS IS INVALID

The new source standard provides "no discharge of process waste water pollutants" from the manufacture of phosphorus pentasulfide. 40 C.F.R. §422.25, App. 1318. Petitioners' argument with respect to the 1977 and 1983 no-discharge requirement is briefed in No. 74-1687 at pages 65-69.

Molten phosphorus pentasulfide (P_2S_5) ignites on contact with air and generates a complex mixture of phosphorus pentoxide (P_2O_5) and sulfur dioxide (SO_2) fumes. Development Document, App. 1677. Consequently, wet scrubbers are used to reduce fume emissions during the processing ("casting") of P_2S_5 from a molten liquid to a solid. The effluent (or "scrubber liquor") from the scrubber (given by EPA as 7,200 gallons per ton of P_2S_5 produced) is a major effluent source at a phosphorus pentasulfide plant. Development Document, App. 1677 and 1707.

EPA proposed two options for eliminating this effluent to achieve zero discharge. One technology, according to EPA, would be to substitute inert atmosphere casting or vacuum casting for the wet scrubbing of the fumes from the casting of liquid phosphorus pentasulfide. Development Document, App. 1774. This would, according to EPA, eliminate contact between the molten P_2S_5 and air and, hence, fumes to be scrubbed.

As an alternative, EPA recommends achievement of zero discharge by (1) using dilute caustic or lime slurry to reduce the volume

of waste water, (2) partial recycle of scrubber liquor, (3) lime treatment and sedimentation followed by (4) total recycle of the treated waste to process. Development Document, App. 1774. It is with the fourth step of the alternative technology for phosphorus pentasulfide plants that Petitioners take issue.

A. EPA's Hypothesized Technology Has Not Been Demonstrated Or Considered in The Industry.

EPA did not, and could not, cite any existing plant in support of its zero discharge standard of performance. EPA compiled data on two phosphorus pentasulfide plants (Hooker's Niagara Falls, New York and Columbus, Mississippi plants). Neither achieves zero discharge by recycle, by vacuum or inert atmosphere casting, or by any other means. App. 440, 313. Hooker's Columbus, Mississippi plant, at the time it was visited by EPA's contractor, was installing a new scrubber system and expressed the hope that it could reduce effluent to 3600 gallons per day of discharged process waste water through partial recycle. App. 440. Neither total recycle nor vacuum or inert casting was discussed by the contractor or EPA with or in connection with these plants.

B. Inert Atmosphere or Vacuum Casting Is Not Demonstrated For the Zero Discharge Requirement

EPA can look to in-process changes in assessing best available demonstrated technology for the standards of performance under Section 306. However, there must be a sound basis for concluding that the technology is available and demonstrated.

EPA has no such basis for inert atmosphere or vacuum casting. There is no evidence in the record or citations to literature to support the assertion that there "are various state-of-the-art techniques available for casting either an inert atmosphere or in a vacuum". Development Document, App. 1751.

Even EPA recognized the magnitude of its proposal and the fact that it would require radically different production methods in the P_2S_5 industry:

"This is a relatively expensive control technique, requiring major revisions not only of the casting equipment by also of the basic casting procedures . . . The annual cost of the inert gas (assuming it is not recycled) must be estimated." Development Document, App. 1760 (emphasis added).

Further, the fact that EPA could only estimate the cost underscores the fact that the technology is a result of speculation or imagination and is in no way related to an existing, demonstrated, or available technology.

Finally, EPA's speculation on inert atmosphere or vacuum casting rests explicitly on the premise that "the sole source of process waste water is the scrubber liquor for fumes from casting liquid P_2S_5 ." Development Document, App. 1774. EPA's own description of the process noted that effluents may result from scrubbing of dusts and fumes from crushing and product purification operations separate and apart from the casting step. Development Document, App. 1677. Commentors also pointed out such additional sources,

including the off gas from the reactor vessel and the phosphorus pentasulfide milling and packaging operations and waste water which results from the cleaning of containers. App. 309, 946. In short, EPA's recommended technology deals with only one of several process waste water streams found in P_2S_5 plants.

C. Total Recycle Technology Is Not Available or Demonstrated.

The move from partial to total recycle, particularly to air emission control equipment, is a huge technological leap. This leap has not been made in the phosphorus pentasulfide industry. EPA has not suggested how it can be attained in a new plant since it did not separately assess abatement potential in new plants.

The complete lack of total recycle technology was pointed out by industry commentators. App. 946. In addition, the obstacles to recycle were noted and explained to EPA by Arthur D. Little, Inc., EPA's own Contractor for the Draft Economic Analysis:

"Total recycle probably cannot be carried out or approached in present equipment: The sulfate-sulfite-lime system, once concentrations build up, requires special scrubbing and fluid handling techniques to keep severe scaling under reasonable control. The problem in lime scrubbing of flue gas illustrates this point." App. 1592 (emphasis added).

A.D. Little was simply stating the established chemical engineering problem with recycle systems: concentrations of dissolved impurities gradually build up every trip the water takes through the recycle loop until they result in plugging or scaling of the transfer

lines or of the air pollution control equipment itself or ineffective operation of the air emission abatement equipment. The only remedy is to "bleed off" part of the scrubbing liquor and replace it with fresh water. The problem would be particularly acute for P_2S_5 plants. In addition to the sulfites and sulfates which would build up rather quickly because of sulfur dioxide in the fumes, the trace quantity of phosphate compounds emitted and entrained in the scrubber liquor (App. 1707) would accelerate scaling problems in the recycle loop. A no-discharge standard promulgated without even discussion of these basic engineering problems cannot be sustained.

IV
THE NEW SOURCE STANDARD FOR SODIUM
TRIPOLYPHOSPHATE IS INVALID AS
APPLIED TO PLANTS PRODUCING
FOOD GRADE SODIUM TRIPOLYPHOSPHATE

The new source standard of performance for sodium tripolyphosphate (STPP) is no discharge of process waste water pollutants. 40 C.F.R. §422.35, App. 1319. The regulation does not distinguish between food grade and non-food grade STPP. The arbitrary application of the STPP zero discharge guidelines for 1977 and 1983 to food grade STPP is discussed in the brief in No. 74-1687 at pages 69-75.

A. Food Grade Sodium Tripolyphosphate Is A Distinct Product, The Quality of Which Is Strictly Regulated.

Most of the STPP manufactured in the United States is used in household laundry formulations. App. 1227. This is commonly known as technical or detergent grade STPP. Quality control, product

purity, etc. for technical or detergent grade STPP is based on the competitive forces of the market place and customer needs.

STPP is also manufactured in the United States for human consumption as a food additive. Unlike its technical or detergent grade counterpart, food grade STPP is subject to stringent quality control by the Food and Drug Administration (FDA).

21 C.F.R. §121.3(d) (1974) provides that "Any substance used in food must be of food-grade quality. The Commissioner [of FDA] regards the applicable specifications in the current edition of 'Food Chemicals Codex' as establishing food grade unless he has by Federal Register promulgation established other specifications". Since the Commissioner has not established "other specifications" for food grade STPP, the "Food Chemicals Codex", a publication of the National Academy of Science's National Research Council, states the applicable legal requirements:

"Assay. Not less than 85.0 percent of $\text{Na}_5\text{P}_3\text{O}_{10}$.
Loss on drying. Not more than 0.7 percent.

Limits of Impurities

Arsenic (as As). Not more than 3 parts per million (0.0003 percent).

Fluoride. Not more than 50 parts per million (0.005 percent).

Heavy metals (as Pb). Not more than 10 parts per million (0.001 percent).

Insoluble substances. Not more than 0.1 percent.

Lead. Not more than 5 parts per million (0.0005 percent)." 1/

1/ National Research Council, Food Chemicals Codex, 780 (2d ed. 1972) (cited portions attached as Appendix D).

B. The Record Is Totally Devoid Of Evidence Supporting A Conclusion That Technology Is Available To Achieve Zero Discharge From A Food Grade STPP Plant

Other than the mere listing of the selling price per ton of food grade STPP (Development Document, App. 1662) there is not a single reference by EPA in the record to the fact that food grade vis-a-vis technical grade STPP even exists. There is no discussion or evidence of consideration of the distinct and serious problems faced by plants which produce food grade STPP.

The technology spelled out by EPA to enable STPP plants to achieve no discharge of process waste water consists of (1) substitution of dry dust collection for wet dust collection and (2) total recycle of contaminated waste to process. See Development Document, App. 1713, 1752, 1754-55, 1757-58, 1777. In fact, of the three plants cited by EPA as exemplifying its no-discharge-via-total-recycle guideline, only ^{1/}one plant manufactures STPP for sale as a human food additive--Monsanto's Trenton, Michigan plant (No. 006). Contractor's Report, App. 72; Draft Development Document, App. 1088, 1125, 1152; Development Document, App. 1713, 1777.

In comments on the Contractor's Report (App. 942, 957, 1320) and again in comments on the Proposed Regulations (App. 1290, 1295) Monsanto repeatedly pointed out in no uncertain terms that its Trenton, Michigan plant did not achieve no discharge of process waste

^{1/} The other two exemplary STPP plants are Hooker Chemicals' Jeffersonville, Indiana plant (No. 042) and FMC's Lawrence, Kansas plant (No. 119). Contractor's Report, App. 72, 139; Draft Development Document, App. 1088, 1125, 1152; Development Document, App. 1713, 1752, 1777.

water. The data on the Trenton, Michigan plant submitted to the Contractor in connection with the Contractor's April 5, 1973, plant visit clearly confirm Monsanto on this point: Trenton, Michigan does not achieve ^{1/}no discharge of process waste water. App. 517-518.

The Contractor's trip report on the Trenton, Michigan plant visit even provided EPA with the reason for Trenton, Michigan's failure to achieve zero discharge. The report passed on to EPA Monsanto's crucial observation that "[f]ood grade . . . phosphate salts plant cannot, using available technology, achieve total recycle". App. 762. The problem pointed out is a simple one, requiring no specialized technological background to understand. When Food and Drug Administration (FDA) food grade specifications have to be maintained, only water of sufficient purity to enable the finished product to conform to those specifications can be recycled to process. This precludes total recycle of waste water to process (the means for achieving "no discharge").

In comments on both the Contractor's Report and on the Proposed Regulations themselves, EPA was told that food grade vis-a-vis

^{1/} EPA itself seems, belatedly, to have realized its error in originally characterizing Trenton, Michigan as a zero discharge plant since one specific reference to Trenton, Michigan as a "no process wastewater" plant in the Draft Development Document (App. 1125, citing three STPP plants, including Trenton, Michigan as having achieved zero discharge) was deleted from the Development Document (App. 1752, citing only two STPP plants, not including Trenton, Michigan, as having achieved zero discharge). Inconsistently, the Development Document still erroneously refers to Trenton, Michigan as a zero discharge STPP plant in two other places. App. 1713; App. 1777.

technical grade STPP plants could not achieve no discharge of process waste water (App. 1265-66, 1293¹, 1290, 1362, 942, 1320, 1328, 1297, 950, 957) because food grade operations/specifications are incompatible with total recycle (App. 1295, 1592); that this problem is even further aggravated in multi-product plant complexes (the rule in the phosphate manufacturing industry rather than the exception) because of the additional danger of cross-product contamination (App. 942, 950, 952, 957, 959, 969-70, 974-77, 1265-66, 1290, 1293, 1295, 1297, 1362-3, 1320, 1328)^{1/}; and, hence, food grade STPP manufacture should be excluded from the regulations pending further study (App. 1363, 1330, 959, 952). It is unfortunate that EPA completely ignored the many attempts of food grade STPP manufacturers to get the point across to EPA that maintenance of food grade purity requirements was incompatible with total recycle technology.

EPA itself recognized in a limited way the impediment which food grade specifications place on recycle. The Development Document's discussion of what to do with contaminated stormwater runoff (a problem in all phosphate plants because the exterior surfaces of buildings, equipment and grounds may be covered with dusts (App. 1731)) states: "Where possible, the solids [collected

^{1/}"Imagine the technical nightmare of trying to recycle the right material to the right process when the same plant produces several different products simultaneously, and at different times, and uses a multitude of raw materials showing up in the effluent stream." App. 950, 957, 1328. Certainly, EPA is not authorized to prohibit the construction of new multi-product plants via a new source standard without assessment of the impact of such a prohibition.

from the stormwater runoff] may be returned to appropriate process streams. Where purity requirements prohibit this return, adequate means for safe disposal of solid wastes must be provided." Development Document, App. 1731 (emphasis added).

How EPA could persevere with a prohibition on discharges from new food grade STPP plants is unexplained and its regulation is untenable.

C. The Cost Of Pollution Control Was Not Considered For Food Grade STPP Manufacture

The zero-dollars estimated cost of achieving no discharge of process waste water for existing STPP plants in the Contractor's Report was quite specifically based only on the manufacture of technical grade STPP. App. 212. This estimated cost was transferred, without change, to the Draft Development Document (App. 1129) and the Development Document (App. 1755).

The Contractor which prepared the Draft Economic Analysis based its conclusion that there would be no significant economic impact caused by STPP producers having to achieve no discharge of process wastes on that same cost information (App. 1236, 1243-44) with the caveat that "[i]f actual costs are significantly higher than indicated in the effluent guideline development document, as a number of producers believe to be the case, significant economic impacts may be felt." App. 1198 (emphasis added).

Even assuming, arguendo, the accuracy of the zero-cost estimates cited in the Contractor's Report, the Draft Development Document, and the Development Document and underlying the conclusions of the Draft Economic Analysis as to technical grade STPP,^{1/} the fact

^{1/} Even for technical grade STPP EPA's own record underlying the zero-dollars cost estimate for pollution control is inconsistent and paradoxical. EPA bases its zero-dollars cost estimate exclusively on the non-cost of installing and operating a dry dust collection system. Development Document, App. 1754-55.

With regard to the existing use of dry dust collection throughout the STPP industry, the record states, variously, that (1) 100 percent of the industry already employs dry dust collection (Development Document, App. 1755; Draft Development Document, App. 1129), and (2) that part of the industry already has it and part does not but can install and operate it at no cost whatsoever because of the product the system will recover (Development Document, App. 1757-58; Draft Development Document, App. 1132; Contractor's Report, App. 204, 212, 223).

Pursuing the record further, it is stated, variously, (1) that product recovery from dry dust collection covers all costs attendant to its installation and operation (Development Document, App. 1755; Draft Development Document, App. 1129), (2) that product recovery may cover those costs (Development Document, App. 1754; Draft Development Document, App. 1128; Contractor's Report, App. 223, 212), and (3) that product recovery "may significantly contribute to alleviating the operating costs" (but not the estimated \$350,000 installation cost) of a dry dust collection system (Development Document, App. 1729, 1759).

In addition to EPA's questionable conclusions on the non-cost of installing and operating a dry dust collection system, the record demonstrated that EPA managed to ignore, in calculating the pollution control costs for STPP plants, the cost of the various in-process controls which comprise an essential part of its recommended "no discharge" technology: recycle of scrubber water (Development Document, App. 1728-29, 1759), housekeeping of leaks, spills, upsets, and storm water runoff (Development Document, App. 1729-31, 1760), and, most importantly, segregation of water streams (Development Document, App. 1727-28, 1759).

remains there is no pollution control cost data or economic impact analysis whatsoever in the record which relates to the manufacture of food grade STPP at new or existing plants. Since under Section 306(b)(1)(B) of the Federal Water Pollution Control Act, cost is a mandatory consideration in establishing new source standards of performance, to allow the no discharge standard EPA has promulgated for new STPP plants to be applied to new food grade STPP plants would be to countenance a clear violation of the Act itself.

V

THE NEW SOURCE STANDARD FOR FOOD
GRADE CALCIUM PHOSPHATE IS INVALID

The new source standard of performance for feed and food grade calcium phosphate plants is no discharge of process waste water pollutants. 40 C.F.R. §422.35, App. 1319. Petitioners deal with the zero discharge 1983 guideline for food grade calcium phosphate plants in the brief in No. 74-1687, at pages 76-85.

A. Food Grade Calcium Phosphate Is A Distinct Product, The Quality of Which Is Strictly Regulated.

One use for nonfertilizer calcium phosphate manufactured in the United States is as an animal feed supplement. App. 1228, 1689. This is commonly known as feed grade calcium phosphate.

A much purer and more expensive grade of calcium phosphate, however, is also manufactured in the United States for use as a dentifrice and for human consumption. App. 1229, 1234, 1662. This is commonly known as food grade (mono-, di-, or tri-) calcium phosphate

and is subject to the very stringent purity requirements of the FDA. 21 C.F.R. §121.3(d).^{1/} The applicable food grade specifications for calcium phosphate impose the following limits on impurities:

Arsenic (as As). Not more than 3 parts per million (0.003 percent).

Fluoride. Not more than 25 parts per million (0.0025 percent) for monocalcium phosphate and 50 parts per million (0.005 percent) for dicalcium and tricalcium phosphates.

Heavy metals (as Pb). Not more than 30 parts per million (0.003 percent).

Lead. Not more than 5 parts per million (0.0005 percent).^{2/}

These Federally required food grade purity requirements, which in essence set forth a definition of food grade calcium phosphate which United States manufacturers must adhere to, add a unique dimension to the effluent pollution control problems of food grade vis-a-vis non-food grade (animal feed grade) calcium phosphate plants. EPA itself recognized this from the outset to some extent, at least, by dealing with food grade calcium phosphate separately from its animal feed grade counterpart. See, e.g., Contractor's Report, App. 137-39, 143; Draft Development Document, App. 1152-54, 1157; Economic Analysis, App. 1229-34, 1239-40; Development Document, 1777-78, 1781, 1784-5; Final Regulations, 40 C.F.R. §422.32, 422.33, App. 1318-19.

^{1/} See, supra, page 49. As in the case of STPP, the Commissioner of FDA has not promulgated specific standards for calcium phosphate. Thus the Food Chemicals Codex specifications are controlling.

^{2/} National Research Council, Food Chemicals Codex, 146-51 (2d ed. 1972) (cited portions attached as Appendix C).

B. EPA's Recommended Technology Is Based On Patently Erroneous Assumptions.

EPA's recommended technology for achieving zero discharge from food grade calcium phosphate plants consists of (1) the elimination of half the raw aqueous wastes via the substitution of dry dust collection for wet scrubbers and (2) the lime treatment and vacuum filtration of the other half of the raw aqueous wastes to a level of effluent reduction which EPA "expects" will permit recycle to process without causing FDA's food grade purity requirements for calcium phosphate to be exceeded. Petitioners take issue in this brief with the second segment of EPA's recommended technology: lime treatment, vacuum filtration and recycle to process.

EPA states that the lime treatment and vacuum filtration segment of its technology is based on Monsanto's Trenton, Michigan plant (006). Development Document, App. 1785. Trenton, Michigan is a food grade sodium tripolyphosphate (STPP) plant; it manufactures no calcium phosphate. App. 945, 949, 956, 1323, 1327.

As was pointed out in the discussion of food grade STPP,^{1/} the Trenton, Michigan plant does not achieve zero discharge of process waste water. Furthermore, EPA was able to cite not a single food grade calcium phosphate plant that achieves zero discharge.^{2/}

What EPA actually did in constructing the lime treatment-vacuum filtration segment of its recommended technology was: it

^{1/} See Pages 50-51, supra.

^{2/} Occidental's Davenport, Iowa plant (182) does not make food grade calcium phosphate (App. 487) and Monsanto's Carondelet, Missouri plant does not achieve zero discharge (App. 537, 603).

took the raw waste load of Monsanto's Carondelet, Missouri food grade calcium phosphate plant (App. 949, 956). It applied to that raw waste load the results of a laboratory experiment on filtration of the effluent from the Trenton plant. EPA did not use the actual treatment efficiencies of the Trenton Michigan STPP plant's double liming and vacuum filtration system.

After standard lime treatment for neutralization and precipitation of phosphates, EPA projects that vacuum filtration can achieve reduction of the phosphate suspended solids level to 0.5 milligrams per liter (mg/l). Development Document, App. 1785. ^{1/} EPA's only basis in the record for projecting that vacuum filtration can reduce the suspended solids content of the water from phosphates to 0.5 mg/l is a citation to a 1969 report prepared for Monsanto in connection with plans for treatment at Trenton. Contractor's Report, App. 139, 155. The report is in the record. App. 858 et seq., 871-72.

EPA can look to sound data other than full scale plant operation in establishing a new source standard. What the Act does not permit is EPA's refusal to recognize that such data have been proven wrong.

Monsanto patiently pointed out to EPA's Contractor and to EPA in comments on the Contractor's Report and on the Proposed Regulations themselves that the 0.5 mg/l figure was based only on some laboratory filtration of the effluent at Trenton, Michigan but that the subsequent

1/ Phosphate suspended solids are those very fine particles of calcium phosphate in the saturated process waste stream which, because of their size, have not been removed by gravity settling or filtration.

actual experience of the exemplary treatment system at Trenton, Michigan was that vacuum filtration achieves a level of phosphate suspended solids removal ranging from 50-150 mg/l (100-300 times higher than the prototype published figure EPA incorporated into its recommended technology). App. 945, 1296, 1323. EPA never even acknowledged much less responded to these comments.

EPA's error in continuing to base its technology in significant part on the assumption that vacuum filtration could reduce the level of phosphate suspended solids to 0.5 mg/l completely distorts its projection for the level of total suspended solids its technology can achieve. Using the erroneous 0.5 mg/l figure for the achievable level of phosphate suspended solids, EPA calculated that its technology would reduce total suspended solids to a level of .005 pounds per ton (lb/ton). Development Document, App. 1785. Substituting the correct range of phosphate suspended solids achieved by vacuum filtration at the exemplary Trenton, Michigan plant, the total suspended solids level achieved jumps to a range of .42 to 1.25 lb/ton.^{1/} This range is 84 to 250 times higher than the level of total suspended solids (the incorrect .005 lb/ton figure) which EPA "expected" to be compatible with recycle to a food grade calcium phosphate plant. Development Document, App. 1785.

EPA softened its projection that vacuum filtration could

^{1/} The conversion factor from mg/l to lbs/gal is .00000833. Therefore at 50 mg/l of suspended solids and a flow of 1000 gals/ton of product (Development Document, App. 1785), the pounds of suspended solids per ton of product would be: $1000 \times .00000833 \times 50 = .42$. For 150 mg/l of suspended solids the pounds of suspended solids per ton of product would be: $1000 \times .00000833 \times 150 = 1.25$.

achieve a phosphate suspended solids level of .05 mg/l by parenthetically adding "possibly after conditioning with a polymeric flocculent."

Development Document, App. 1785. EPA's recommended use of a polymeric flocculent ^{1/} in treating the waste from a food grade calcium phosphate plant prior to vacuum filtration and recycle to process is technically unsound, as was clearly pointed out to EPA by EPA's own Contractor:

"Polymeric flocculents could significantly reduce the suspended solids in the effluent, but they cannot be used here [Monsanto's Carondelet, Missouri, food grade calcium phosphate plant] since the product is all food grade and they would contaminate recycle streams." App. 538 (emphasis added). ^{2/}

C. EPA's Recommended Treatment Technology Failed To Consider Significant Effluent Pollution Control Problems Which Could Prevent Recycle Because Of The Need To Maintain Food Purity

1. EPA Failed To Consider The Inevitable Buildup Of Non-Phosphate Dissolved Solids In Its Recommended Recycle System.

Arthur D. Little, Inc., the firm selected by EPA to prepare the Economic (Impact) Analysis of the effluent limitations guidelines for the phosphorus chemicals industry, filed a comment with EPA criticizing the Contractor's Report's recommended recycle technology for food grade phosphate plants on the ground that: "[i]t is highly improbable that product specifications can be maintained on total recycle since impurities entering with makeup water and the raw

^{1/} A polymeric flocculent is a material which, when added to the process waste water, causes small particles of suspended solids to bind together, thus enhancing their removal by gravity settling or filtration.

^{2/} For other comments warning EPA, to no avail, that the use of polymeric flocculents in the context of its recommended technology for food grade calcium phosphate was undemonstrated and inappropriate. See App. 945, 950, 957, 1291, 1298, 1232.

materials will build up in concentration." App. 1592.

A.D. Little was simply stating the chemical engineering fact discussed above in connection with P_2S_5 plants (pages 47-49, supra): in a closed loop system untreated impurities from the makeup water and raw materials build up incrementally each trip through the loop. In constructing its recommended technology for achieving zero discharge from food grade calcium phosphate plants, EPA ignored this axiom by erroneously equating total dissolved solids with dissolved phosphates and by considering only one pass through its recommended recycle loop. ^{1/} Development Document, App. 1785.

Thus, even assuming that EPA's recommended technology fully achieves as the level of dissolved phosphates the limit which EPA erroneously designates as the level of total dissolved solids (0.003 lb/ton, Development Document, App. 1785), concentrations of solids in the makeup water and raw materials other than phosphates are still passing repeatedly through the loop untreated and are incrementally building up. Such dissolved solids could include chlorides (Development Document, App. 1719; App. 267-68, 544, 593), fluorides

^{1/} The factor to convert from dissolved phosphate ion to dissolved dibasic calcium phosphate is 1.4. Thus .3 mg/l of phosphate corresponds to a total dissolved calcium phosphate of .4 mg/l. The following calculation converts a .4 mg/l concentration into pounds per ton (lb/ton) of product at a waste flow of 1,000 gallons per ton (gal/ton) of product, the food grade calcium phosphate plant waste flow posited by EPA in the Development Document (App. 1778, 1785). Since the conversion factor from milligrams per liter (mg/l) to pounds per ton (lb/ton) is .00000833 at 1,000 gallons per ton (gal/ton) of product the pounds of dibasic calcium phosphate in the waste would be: $1000 \times .00000833 \times .4 = .003$ lb/ton. This figure .003 lb/ton of dissolved phosphate corresponds exactly with the .003 lb/ton figure EPA cites in the Development Document as total dissolved solids. App. 1785.

(Development Document, App. 1718; App. 170, 229-41, 593), arsenic^{1/}
(Development Document, App. 1723), nitrates (Development Document,
App. 1719; App. 267-68, 589), sulfates (Development Document,
App. 1718-19; App. 592), and lead (App. 594.)

Therefore, particularly in light of the very stringent calcium phosphate food grade purity requirements relating to arsenic, fluoride, lead, and heavy metals, it was a critical error of omission for EPA to neglect, as it did, to at least discuss the implications that the continual build up of such nonphosphate dissolved solids in its proposed recycle system would have upon the maintenance of Federally required food grade purity specifications.

2. EPA Failed To Deal With The Problems Of Contaminated Stormwater Runoff, Upsets, and Leaks and Spills.

^{2/}
As discussed supra, EPA's expansive definition of process waste water could include contaminated stormwater runoff, upsets, and leaks and spills. Although EPA itself clearly recognized that total recycle of such contaminated non-production related streams might not be possible due to purity (stormwater runoff, Development Document, App. 1731) or other unstated considerations (upset wastes, Development Document, App. 1731), EPA totally failed to consider the impact of recycling such waste streams on the specific Federal purity

^{1/} Although arsenic is removed from phosphoric acid to a harmless level before the phosphoric acid is used in the manufacture of food grade calcium phosphate, the harmless traces of arsenic in the acid could be gradually increased to a more dangerous concentration by total recycle since the traces of arsenic would incrementally build up each trip through the loop. This possibility demanded, but did not get, EPA's attention.

^{2/} Pages 19-22.

specifications for food grade calcium phosphate.

D. EPA's Conclusions About Recycling Without Impairing Food Grade Purity Are Bald Assumptions Totally Unsupported By The Record.

Unfortunately ignored by EPA were comments throughout the record (1) warning EPA that, even if its technology did all EPA claimed, the treated waste water from food grade calcium phosphate plants still could not be recycled to process without causing Federally required food grade purity requirements to be exceeded (App. 946, 950, 957, 1328); and (2) recommending to EPA that food grade phosphate plants be excluded from EPA's regulations pending further study (App. 952, 959, 1330, 1363).

Instead, EPA, having stated its projection of the total suspended and total dissolved solids its technology can achieve for the process waste from food grade calcium phosphate plants, boldly asserts that:

"With the achievement of these extremely low levels of TDS and TSS, or even with considerable relaxation of these levels, the treated-waste water from the manufacture of food grade calcium phosphate is expected to meet the U.S. Food and Drug Administration criteria for process water and this treated water can then be recycled back into the process." Development Document, App. 1785. (emphasis added).

Even assuming, purely for the sake of argument, that EPA's recommended technology were both complete and error free, rendering its projected levels of effluent pollution reduction realistic, there is no basis or explanation in the record whatsoever underlying EPA's sanguine "expectation" that these levels are compatible with recycle to food grade calcium phosphate process and will not exceed that

product's stringent FDA purity specifications. Inexplicably, EPA's record contains no allusion to the specific food grade specifications for calcium phosphate, much less a discussion by EPA detailing the impact of its projected levels of effluent pollution ^{1/}reduction on those specifications in the event of recycle to process. The record does not even disclose any attempt by EPA to confer with or obtain the advice of FDA on this point.

There is a clincher for EPA's complete lack of reasoned concern for product purity. After EPA's statement concerning its expectation that its technology achieved a sufficient level of effluent pollution reduction to permit recycle to process in consonance with FDA requirements, EPA went on to state that:

"In fact, once the commitment to total recycle is made, the lime treatment step may be bypassed since the ionic species from the dissolved solids and the phosphoric acid are precisely those desired in the reaction vessel." Development Document, App. 1785 (emphasis added).

That statement is inherently inconsistent with the underlying premise of EPA's own elaborate treatment-to-a-level-of-recyclability technology. In short, as one commentor put it, ". . . the statement . . . 'once the commitment to total recycle is made, the lime treatment step may be by-passed' is unsubstantiated and, in fact, unbelievable." App. 946 (emphasis added).

^{1/} As in the case of food grade STPP, the problems of recycle would be even greater in a multiproduct complex, which is usual in the phosphate industry. See note 1 and accompanying text, supra, at page 52.

CONCLUSION

The regulations establishing standards of performance for new sources in the Phosphate Manufacturing Point Source Category should be set aside and remanded to the Agency.

Respectfully submitted,

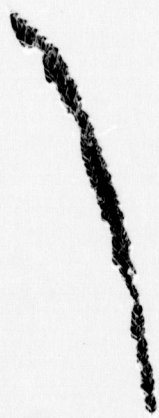
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ATTORNEYS FOR PETITIONERS



APPENDIX A

The pertinent provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251 et seq., are as follows:

§ 1311. Effluent limitations—Illegality of pollutant discharges except in compliance with law

(a) Except as in compliance with this section and sections 1312; 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

Timetable for achievement of objectives

(b) In order to carry out the objective of this chapter there shall be achieved—

(1) (A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 1314(b) of this title, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 1317 of this title; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314 (d) (1) of this title; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

(2) (A) not later than July 1, 1983, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b) (2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 1325 of this title), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b) (2) of this title, or (ii) in the case of the introduction of a pollutant into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, shall require compliance with any applicable pretreatment requirements and any other requirement under section 1317 of this title; and

(B) not later than July 1, 1983, compliance by all publicly owned treatment works with the requirements set forth in section 1281 (g) (2) (A) of this title.

Modification of timetable

(c) The Administrator may modify the requirements of subsection (b) (2) (A) of this section with respect to any point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

Review and revision of effluent limitations

(d) Any effluent limitation required by paragraph (2) of subsection (b) of this section shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under such paragraph.

All point discharge source application of effluent limitations

(e) Effluent limitations established pursuant to this section or section 1312 of this title shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this chapter.

Illegality of discharge of radiological, chemical, or biological warfare agents or high-level radioactive waste

(f) Notwithstanding any other provisions of this chapter it shall be unlawful to discharge any radiological, chemical, or biological warfare agent or high-level radioactive waste into the navigable waters. June 30, 1948, c. 758, Title III, § 301, as added Oct. 18, 1972, Pub.L. 92-500, § 2, 86 Stat. 844.

§ 1312. Water quality related effluent limitations

(a) Whenever, in the judgment of the Administrator, discharges of pollutants from a point source or group of point sources, with the application of effluent limitations required under section 1311(b) (2) of this title, would interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters which shall assure protection of public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water, effluent limitations (including alternative effluent control strategies) for such point source or sources shall be established which can reasonably be expected to contribute to the attainment or maintenance of such water quality.

(b) (1) Prior to establishment of any effluent limitation pursuant to subsection (a) of this section, the Administrator shall issue notice of intent to establish such limitation and within ninety days of such notice hold a public hearing to determine the relationship of the economic and social costs of achieving any such limitation or limitations, including any economic or social dislocation in the affected community or communities, to the social and economic benefits to be obtained (including the attainment of the objective of this chapter) and to determine whether or not such effluent limitations can be implemented with available technology or other alternative control strategies.

(2) If a person affected by such limitation demonstrates at such hearing that (whether or not such technology or other alternative control strategies are available) there is no reasonable relationship between the economic and social costs and the benefits to be obtained (including attainment of the objective of this chapter), such limitation shall not become effective and the Administrator shall adjust such limitation as it applies to such person.

(c) The establishment of effluent limitations under this section shall not operate to delay the application of any effluent limitation established under section 1311 of this title.

June 30, 1948, c. 758, Title III, § 302; as added Oct. 18, 1972, Pub.L. 92-500, § 2, 86 Stat. 846.

§ 1314. Information and guidelines—Criteria development and publication

(a) (1) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after October 18, 1972 (and from time to time thereafter revise) criteria for water quality accurately reflecting the latest scientific knowledge (A) on the kind and extent of all identifiable effects on health and welfare including, but not limited to, plankton, fish, shellfish, wildlife, plant life, shorelines, beaches, esthetics, and recreation which may be expected from the presence of pollutants in any body of water, including ground water; (B) on the concentration and dispersal of pollutants, or their byproducts, through biological, physical, and chemical processes; and (C) on the effects of pollutants on biological community diversity, productivity, and stability, including information on the factors affecting rates of eutrophication and rates of organic and inorganic sedimentation for varying types of receiving waters.

(2) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after October 18, 1972 (and from time to time thereafter revise) information (A) on the factors necessary to restore and maintain the chemical, physical, and biological integrity of all navigable waters, ground waters, waters of the contiguous zone, and the oceans; (B) on the factors necessary for the protection and propagation of shellfish, fish, and wildlife for classes and categories of receiving waters and to allow recreational activities in and on the water; and (C) on the measurement and classification of water quality; and (D) for the purpose of section 1313 of this title, on and the identification of pollutants suitable for maximum daily load measurement correlated with the achievement of water quality objectives.

(3) Such criteria and information and revisions thereof shall be issued to the States and shall be published in the Federal Register and otherwise made available to the public.

Effluent limitation guidelines

(b) For the purpose of adopting or revising effluent limitations under this chapter the Administrator shall, after consultation with appropriate Federal and State agencies and other interested persons, published within one year of October 18, 1972, regulations, providing guidelines for effluent limitations and, at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall—

(1) (A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best practicable control technology currently available for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the control measures and practices to be applicable to point sources (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best practicable control technology currently available to comply with subsection (b) (1) of section 1311 of this title shall include consideration of the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, and shall also take into account the size of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate;

(2) (A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods, and other alternatives for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the best measures and practices available to comply with subsection (b) (2) of section 1311 of this title to be applicable to any point source (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate; and

(3) Identify control measures and practices available to eliminate the discharge of pollutants from categories and classes of point sources, taking into account the cost of achieving such elimination of the discharge of pollutants.

Pollution discharge elimination procedures

(c) The Administrator, after consultation, with appropriate Federal and State agencies and other interested persons, shall issue to the States and appropriate water pollution control agencies within 270 days after October 18, 1972 (and from time to time thereafter) information on the processes, procedures, or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under section 1316 of this title. Such information shall include technical and other data, including costs, as are available on alternative methods of elimination or reduction of the discharge of pollutants. Such information, and revisions thereof, shall be published in the Federal Register and otherwise shall be made available to the public.

Secondary treatment information; alternative waste treatment management techniques and systems

(d) (1) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall publish within sixty days after October 18, 1972 (and from time to time thereafter) information, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, on the degree of effluent reduction attainable through the application of secondary treatment.

(2) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall publish within nine months after October 18, 1972 (and from time to time thereafter) information on alternative waste treatment management techniques and systems available to implement section 1281 of this title.

Identification and evaluation of nonpoint sources of pollution; processes, procedures, and methods to control pollution

(e) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall issue to appropriate Federal agencies, the States, water pollution control agencies, and agencies designated under section 1288 of this title, within one year after October 18, 1972 (and from time to time thereafter) information including (1) guidelines for identifying and evaluating the nature and extent of nonpoint sources of pollutants, and (2) processes, procedures, and methods to control pollution resulting from—

(A) agricultural and silvicultural activities, including runoff from fields and crop and forest lands;

(B) mining activities, including runoff and siltation from new, currently operating, and abandoned surface and underground mines;

(C) all construction activity, including runoff from the facilities resulting from such construction;

(D) the disposal of pollutants in wells or in subsurface excavations;

(E) salt water intrusion resulting from reductions of fresh water flow from any cause including extraction of ground water, irrigation, obstruction, and diversion; and

(F) changes in the movement, flow, or circulation of any navigable waters or ground waters, including changes caused by the construction of dams, levees, channels, causeways, or flow diversion facilities.

Such information and revisions thereof shall be published in the Federal Register and otherwise made available to the public.

Guidelines for pretreatment of pollutants

(f) (1) For the purpose of assisting States in carrying out programs under section 1342 of this title, the Administrator shall publish, within one hundred and twenty days after October 18, 1972, and review at least annually thereafter and, if appropriate, revise guidelines for pretreatment of pollutants which he determines are not susceptible to treatment by publicly owned treatment works. Guidelines under this subsection shall be established to control and prevent the discharge into the navigable waters, the contiguous zone, or the ocean (either directly or through publicly owned treatment works) of any pollutant which interferes with, passes through, or otherwise is incompatible with such works.

(2) When publishing guidelines under this subsection, the Administrator shall designate the category or categories of treatment works to which the guidelines shall apply.

Test procedure guidelines

(g) The Administrator shall, within one hundred and eighty days from October 18, 1972, promulgate guidelines establishing test procedures for the analysis of pollutants that shall include the factors which must be provided in any certification pursuant to section 1341 of this title or permit application pursuant to section 1342 of this title.

Guidelines for monitoring, reporting, enforcement, funding, personnel, and manpower

(h) The Administrator shall (1) within sixty days after October 18, 1972, promulgate guidelines for the purpose of establishing uniform application forms and other minimum requirements for the acquisition of information from owners and operators of point sources of discharge subject to any State program under section 1342 of this title, and (2) within sixty days from October 18, 1972, promulgate guidelines establishing the minimum procedural and other elements of any State program under section 1342 of this title which shall include:

(A) monitoring requirements;

(B) reporting requirements (including procedures to make information available to the public);

(C) enforcement provisions; and

(D) funding, personnel qualifications, and manpower requirements (including a requirement that no board or body which approves permit applications or portions thereof shall include, as a member, any person who receives, or has during the previous two years received, a significant portion of his income directly or indirectly from permit holders or applicants for a permit.)

Restoration and enhancement of publicly owned fresh water lakes

(i) The Administrator shall, within 270 days after October 18, 1972 (and from time to time thereafter), issue such information on methods, procedures, and processes as may be appropriate to restore and enhance the quality of the Nation's publicly owned fresh water lakes.

Agreements with Secretaries of Agriculture, Army, and Interior to provide maximum utilization of programs to achieve and maintain water quality; transfer of funds; authorization of appropriations

(j) (1) The Administrator shall, within six months from October 18, 1972, enter into agreements with the Secretary of Agriculture, the Secretary of the Army, and the Secretary of the Interior to provide for the maximum utilization of the appropriate programs authorized under other Federal law to be carried out by such Secretaries for the purpose of achieving and maintaining water quality through appropriate implementation of plans approved under section 1288 of this title.

(2) The Administrator, pursuant to any agreement under paragraph (1) of this subsection is authorized to transfer to the Secretary of Agriculture, the Secretary of the Army, or the Secretary of the Interior any funds appropriated under paragraph (3) of this subsection to supplement any funds otherwise appropriated to carry out appropriate programs authorized to be carried out by such Secretaries.

(3) There is authorized to be appropriated to carry out the provisions of this subsection, \$100,000,000 per fiscal year for the fiscal year ending June 30, 1973, and the fiscal year ending June 30, 1974. June 30, 1948, c. 758, Title III, § 304, as added Oct. 18, 1972, Pub.L. 92-500, § 2, 86 Stat. 850.

§ 1316. National standards of performance—Definitions

(a) For purposes of this section:

(1) The term "standard of performance" means a standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

(2) The term "new source" means any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under this section which will be applicable to such source, if such standard is thereafter promulgated in accordance with this section.

(3) The term "source" means any building, structure, facility, or installation from which there is or may be the discharge of pollutants.

(4) The term "owner or operator" means any person who owns, leases, operates, controls, or supervises a source.

(5) The term "construction" means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

Categories of sources; Federal standards of performance for new sources

(b) (1) (A) The Administrator shall, within ninety days after October 18, 1972, publish (and from time to time thereafter shall revise) a list of categories of sources, which shall, at the minimum, include:

- pulp and paper mills;
- paperboard, builders paper and board mills;
- meat product and rendering processing;
- dairy product processing;
- grain mills;
- canned and preserved fruits and vegetables processing;
- canned and preserved seafood processing;
- sugar processing;
- textile mills;
- cement manufacturing;
- feedlots;
- electroplating;
- organic chemicals manufacturing;
- inorganic chemicals manufacturing;
- plastic and synthetic materials manufacturing;
- soap and detergent manufacturing;
- fertilizer manufacturing;
- petroleum refining;
- iron and steel manufacturing;
- nonferrous metals manufacturing;
- phosphate manufacturing;
- steam electric powerplants;
- ferroalloy manufacturing;
- leather tanning and finishing;
- glass and asbestos manufacturing;
- rubber processing; and
- timber products processing.

(B) As soon as practicable, but in no case more than one year, after a category of sources is included in a list under subparagraph (A) of this paragraph, the Administrator shall propose and publish regulations establishing Federal standards of performance for new sources within such category. The Administrator shall afford interested persons an opportunity for written comment on such proposed regulations. After considering such comments, he shall promulgate, within one hundred and twenty days after publication of such proposed regulations, such standards with such adjustments as he deems appropriate. The Administrator shall, from time to time, as technology and alternatives change, revise such standards following the procedure required by this subsection for promulgation of such standards. Standards of performance, or revisions thereof, shall become effective upon promulgation. In establishing or revising Federal standards of performance for new sources under this section, the Administrator shall take into consideration the cost of achieving such effluent reduction, and any non-water quality environmental impact and energy requirements.

(2) The Administrator may distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards and shall consider the type of process employed (including whether batch or continuous).

(3) The provisions of this section shall apply to any new source owned or operated by the United States.

State enforcement of standards of performance

(c) Each State may develop and submit to the Administrator a procedure under State law for applying and enforcing standards of performance for new sources located in such State. If the Administrator finds that the procedure and the law of any State require the application and enforcement of standards of performance to at least the same extent as required by this section, such State is authorized to apply and enforce such standards of performance (except with respect to new sources owned or operated by the United States).

Protection from more stringent standards

(d) Notwithstanding any other provision of this chapter, any point source the construction of which is commenced after October 18, 1972, and which is so constructed as to meet all applicable standards of performance shall not be subject to any more stringent standard of performance during a ten-year period beginning on the date of completion of such construction or during the period of depreciation or amortization of such facility for the purposes of section 167 or 169 (or both) of Title 26, whichever period ends first.

Illegality of operation of new sources in violation of applicable standards of performance

(e) After the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.

June 30, 1948, c. 758, Title III, § 306, as added Oct. 18, 1972, Pub.L. 92-500, § 2, 86 Stat. 854.

§ 1317. Toxic and pretreatment effluent standards; establishment; revision; illegality of source operation in violation of standards

(a) (1) The Administrator shall, within ninety days after October 18, 1972, publish (and from time to time thereafter revise) a list which includes any toxic pollutant or combination of such pollutants for which an effluent standard (which may include a prohibition of the discharge of such pollutants or combination of such pollutants) will be established under this section. The Administrator in publishing such list shall take into account the toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms and the nature and extent of the effect of the toxic pollutant on such organisms.

(2) Within one hundred and eighty days after the date of publication of any list, or revision thereof, containing toxic pollutants or combination of pollutants under paragraph (1) of this subsection, the Administrator, in accordance with section 553 of Title 5, shall publish a proposed effluent standard (or a prohibition) for such pollutant or combination of pollutants which shall take into account the toxicity of the pollutant, its persistence, degradability, the usual or potential presence of the affected organisms in any waters, the importance of the affected organisms and the nature and extent of the effect of the toxic pollutant on such organisms, and he shall publish a notice for a public hearing on such proposed standard to be held within thirty days. As soon as possible after such hearing, but not later than six months after publication of the proposed effluent standard (or prohibition), unless the Administrator finds, on the record, that a modification of such proposed standard (or prohibition) is justified based upon a preponderance of evidence adduced at such hearings, such standard (or prohibition) shall be promulgated.

(3) If after a public hearing the Administrator finds that a modification of such proposed standard (or prohibition) is justified, a revised effluent standard (or prohibition) for such pollutant or combination of pollutants shall be promulgated immediately. Such standard (or prohibition) shall be reviewed and, if appropriate, revised at least every three years.

(4) Any effluent standard promulgated under this section shall be at that level which the Administrator determines provides an ample margin of safety.

(5) When proposing or promulgating any effluent standard (or prohibition) under this section, the Administrator shall designate the category or categories of sources to which the effluent standard (or prohibition) shall apply. Any disposal of dredged material may be included in such a category of sources after consultation with the Secretary of the Army.

(6) Any effluent standard (or prohibition) established pursuant to this section shall take effect on such date or dates as specified in the order promulgating such standard, but in no case more than one year from the date of such promulgation.

(7) Prior to publishing any regulations pursuant to this section the Administrator shall, to the maximum extent practicable within the time provided, consult with appropriate advisory committees, States, independent experts, and Federal departments and agencies.

(b) (1) The Administrator shall, within one hundred and eighty days after October 18, 1972, and from time to time thereafter, publish proposed regulations establishing pretreatment standards for introduction of pollutants into treatment works (as defined in section 1292 of this title) which are publicly owned for those pollutants which are determined not to be susceptible to treatment by such treatment works or which would interfere with the operation of such treatment works. Not later than ninety days after such publication, and after opportunity for public hearing, the Administrator shall promulgate such pretreatment standards. Pretreatment standards under this subsection shall specify a time for compliance not to exceed three years from the date of promulgation and shall be established to prevent the discharge of any pollutant through treatment works (as defined in section 1292 of this title) which are publicly owned, which pollutant interferes with, passes through, or otherwise is incompatible with such works.

(2) The Administrator shall, from time to time, as control technology, processes, operating methods, or other alternatives change, revise such standards following the procedure established by this subsection for promulgation of such standards.

(3) When proposing or promulgating any pretreatment standard under this section, the Administrator shall designate the category or categories of sources to which such standard shall apply.

(4) Nothing in this subsection shall affect any pretreatment requirement established by any State or local law not in conflict with any pretreatment standard established under this subsection.

(c) In order to insure that any source introducing pollutants into a publicly owned treatment works, which source would be a new source subject to section 1316 of this title if it were to discharge pollutants, will not cause a violation of the effluent limitations established for any such treatment works, the Administrator shall promulgate pretreatment standards for the category of such sources simultaneously with the promulgation of standards of performance under section 1316 of this title for the equivalent category of new sources. Such pretreatment standards shall prevent the discharge of any pollutant into such treatment works, which pollutant may interfere with, pass through, or otherwise be incompatible with such works.

(d) After the effective date of any effluent standard or prohibition or pretreatment standard promulgated under this section, it shall be unlawful for any owner or operator of any source to operate any source in violation of any such effluent standard or prohibition or pretreatment standard.

June 30, 1948, c. 758, Title III, § 307, as added Oct. 18, 1972, Pub.L. 92-500, § 2, 86 Stat. 856.

§ 1319. Enforcement—State enforcement; compliance orders

(a) (1) Whenever, on the basis of any information available to him, the Administrator finds that any person is in violation of any condition or limitation which implements section 1311, 1312, 1316, 1317, or 1318 of this title in a permit issued by a State under an approved permit program under section 1342 of this title, he shall proceed under his authority in paragraph (3) of this subsection or he shall notify the person in alleged violation and such State of such finding. If beyond the thirtieth day after the Administrator's notification the State has not commenced appropriate enforcement action, the Administrator shall issue an order requiring such person to comply with such condition or limitation or shall bring a civil action in accordance with subsection (b) of this section.

(2) Whenever, on the basis of information available to him, the Administrator finds that violations of permit conditions or limitations as set forth in paragraph (1) of this subsection are so widespread that such violations appear to result from a failure of the State to enforce such permit conditions or limitations effectively, he shall so notify the State. If the Administrator finds such failure extends beyond the thirtieth day after such notice, he shall give public notice of such finding. During the period beginning with such public notice and ending when such State satisfies the Administrator that it will enforce such conditions and limitations (hereafter referred to in this section as the period of "federally assumed enforcement"), the Administrator shall enforce any permit condition or limitation with respect to any person—

(A) by issuing an order to comply with such condition or limitation, or

(B) by bringing a civil action under subsection (b) of this section.

(3) Whenever on the basis of any information available to him the Administrator finds that any person is in violation of section 1311, 1312, 1316, 1317, or 1318 of this title, or is in violation of any permit condition or limitation implementing any of such sections in a permit issued under section 1342 of this title by him or by a State, he shall issue an order requiring such person to comply with such section or requirement, or he shall bring a civil action in accordance with subsection (b) of this section.

(4) A copy of any order issued under this subsection shall be sent immediately by the Administrator to the State in which the violation occurs and other affected States. Any order issued under this subsection shall be by personal service and shall state with reasonable specificity the nature of the violation, specify a time for compliance, not to exceed thirty days, which the Administrator determines is reasonable, taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements. In any case in which an order under this subsection (or notice to a violator under paragraph (1) of this subsection) is issued to a corporation, a copy of such order (or notice) shall be served on any appropriate corporate officers. An order issued under this subsection relating to a violation of section 1318 of this title shall not take effect until the person to whom it is issued has had an opportunity to confer with the Administrator concerning the alleged violation.

Civil actions

(b) The Administrator is authorized to commence a civil action for appropriate relief, including a permanent or temporary injunction, for any violation for which he is authorized to issue a compliance order under subsection (a) of this section. Any action under this subsection may be brought in the district court of the United States for the district in which the defendant is located or resides or is doing business, and such court shall have jurisdiction to restrain such violation and to require compliance. Notice of the commencement of such action shall be given immediately to the appropriate State.

Criminal penalties

(c) (1) Any person who willfully or negligently violates section 1311, 1312, 1316, 1317, or 1318 of this title, or any permit condition or limitation implementing any of such sections in a permit issued under section 1342 of this title by the Administrator or by a State, shall be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or by both. If the conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two years, or by both.

(2) Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this chapter or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this chapter, shall upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six months, or by both.

(3) For the purposes of this subsection, the term "person" shall mean, in addition to the definition contained in section 1362(5) of this title, any responsible corporate officer.

Civil penalties

(d) Any person who violates section 1311, 1312, 1316, 1317, or 1318 of this title, or any permit condition or limitation implementing any of such sections in a permit issued under section 1342 of this title by the Administrator, or by a State, and any person who violates any order issued by the Administrator under subsection (a) of this section, shall be subject to a civil penalty not to exceed \$10,000 per day of such violation.

State liability for judgments and expenses

(e) Whenever a municipality is a party to a civil action brought by the United States under this section, the State in which such municipality is located shall be joined as a party. Such State shall be liable for payment of any judgment, or any expenses incurred as a result of complying with any judgment, entered against the municipality in such action to the extent that the laws of that State prevent the municipality from raising revenues needed to comply with such judgment.

June 30, 1948, c. 758, Title III, § 309, as added Oct. 18, 1972, Pub.L. 92-500, § 2, 86 Stat., 859.

§ 1363. Citizen suits—Authorization; jurisdiction

(a) Except as provided in subsection (b) of this section, any citizen may commence a civil action on his own behalf—

(1) against any person (including (i) the United States, and (ii) any other governmental instrumentality or agency to the extent permitted by the eleventh amendment to the Constitution) who is alleged to be in violation of (A) an effluent standard or limitation

under this chapter or (B) an order issued by the Administrator or a State with respect to such a standard or limitation, or

(2) against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator.

The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce such an effluent standard or limitation, or such an order, or to order the Administrator to perform such act or duty, as the case may be, and to apply any appropriate civil penalties under section 1319 (d) of this title.

Notice

(b) No action may be commenced—

(1) under subsection (a) (1) of this section—

(A) prior to sixty days after the plaintiff has given notice of the alleged violation (i) to the Administrator, (ii) to the State in which the alleged violation occurs, and (iii) to any alleged violator of the standard, limitation, or order, or

(B) if the Administrator or State has commenced and is diligently prosecuting a civil or criminal action in a court of the United States, or a State to require compliance with the standard, limitation, or order, but in any such action in a court of the United States any citizen may intervene as a matter of right.

(2) under subsection (a) (2) of this section prior to sixty days after the plaintiff has given notice of such action to the Administrator,

except that such action may be brought immediately after such notification in the case of an action under this section respecting a violation of sections 1316 and 1317(a) of this title. Notice under this subsection shall be given in such manner as the Administrator shall prescribe by regulation.

Venue; Intervention by Administrator

(c) (1) Any action respecting a violation by a discharge source of an effluent standard or limitation or an order respecting such standard or limitation may be brought under this section only in the judicial district in which such source is located.

(2) In such action under this section, the Administrator, if not a party, may intervene as a matter of right.

Litigation costs

(d) The court, in issuing any final order in any action brought pursuant to this section, may award costs of litigation (including reasonable attorney and expert witness fees) to any party, whenever the court determines such award is appropriate. The court may, if a temporary restraining order or preliminary injunction is sought, require the filing of a bond or equivalent security in accordance with the Federal Rules of Civil Procedure.

Statutory or common law rights not restricted

(e) Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief (including relief against the Administrator or a State agency).

Effluent standard or limitation

(f) For purposes of this section, the term "effluent standard or limitation under this chapter" means (1) effective July 1, 1973, an unlaw-

ful act under subsection (a) of section 1311 of this title; (2) an effluent limitation or other limitation under section 1311 or 1312 of this title; (3) standard of performance under section 1316 of this title; (4) prohibition, effluent standard or pretreatment standards under section 1317 of this title; (5) certification under section 1341 of this title; or (6) a permit or condition thereof issued under section 1342 of this title, which is in effect under this chapter (including a requirement applicable by reason of section 1323 of this title).

Citizen

(g) For the purposes of this section the term "citizen" means a person or persons having an interest which is or may be adversely affected.

Civil action by State Governors

(h) A Governor of a State may commence a civil action under subsection (a) of this section, without regard to the limitations of subsection (b) of this section, against the Administrator where there is alleged a failure of the Administrator to enforce an effluent standard or limitation under this chapter the violation of which is occurring in another State and is causing an adverse effect on the public health or welfare in his State, or is causing a violation of any water quality requirement in his State. June 30, 1948, c. 758, Title V, § 505, as added Oct. 18, 1972, Pub.L. 92-500, § 2, 86 Stat. 888.

§ 1309. Administrative procedure and judicial review

(a) (1) For purposes of obtaining information under section 1315 of this title, or carrying out section 1367(c) of this title, the Administrator may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and he may administer oaths. Except for effluent data, upon a showing satisfactory to the Administrator that such papers, books, documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of section 1905 of Title 18, except that such paper, book, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter, or when relevant in any proceeding under this chapter. Witnesses summoned shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person under this subsection, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator, to appear and produce papers, books, and documents before the Administrator, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(2) The district courts of the United States are authorized, upon application by the Administrator, to issue subpoenas for attendance and testimony of witnesses and the production of relevant papers, books, and documents, for purposes of obtaining information under sections 1314(b) and (c) of this title. Any papers, books, documents, or other information or part thereof, obtained by reason of such a subpoena shall be subject to the same requirements as are provided in paragraph (1) of this subsection.

(b) (1) Review of the Administrator's action (A) in promulgating any standard of performance under section 1316 of this title, (B) in making any determination pursuant to section 1316(b) (1) (C) of this title, (C) in promulgating any effluent standard, prohibition, or pretreatment standard under section 1317 of this title, (D) in making any determination as to a State permit program submitted under section 1342(b) of this title, (E) in approving or promulgating any effluent limitation or other limitation under section 1311, 1312, or 1316 of this title, and (F) in issuing or denying any permit under section 1342 of this title, may be had by any interested person in the Circuit Court of Appeals of the United States for the Federal judicial district in which such person resides or transacts such business upon application by such person. Any such application shall be made within ninety days from the date of such determination, approval, promulgation, issuance or denial, or after such date only if such application is based solely on grounds which arose after such ninetieth day.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) of this subsection shall not be subject to judicial review in any civil or criminal proceeding for enforcement.

(c) In any judicial proceeding brought under subsection (b) of this section in which review is sought of a determination under this chapter required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence. June 30, 1948, c. 758, Title V, § 509, as added Oct. 18, 1972, Pub.L. 92-500, § 2, 86 Stat. 891, and amended Dec. 23, 1973, Pub.L. 93-207, § 1(6), 87 Stat. 906.

APPENDIX B

The effluent guidelines and standards for the
Phosphate Manufacturing Point Source Category are as follows:

WEDNESDAY, FEBRUARY 20, 1974
WASHINGTON, D.C.

Volume 39 ■ Number 35

PART II



ENVIRONMENTAL PROTECTION AGENCY

PHOSPHATE MANUFACTURING POINT SOURCE CATEGORY

Effluent Guidelines and Standards

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Title 40—Protection of the Environment
CHAPTER I—ENVIRONMENTAL
PROTECTION AGENCY

SUBCHAPTER N—EFFLUENT GUIDELINES AND
STANDARDS

PART 422—PHOSPHATE MANUFACTURING
POINT SOURCE CATEGORY

Effluent Limitation Guidelines

On September 7, 1973 notice was published in the FEDERAL REGISTER (38 FR 24470), that the Environmental Protection Agency (EPA or Agency) was proposing effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources within the phosphorus producing, phosphorous consuming and phosphate subcategories of the phosphate manufacturing category of point sources. The purpose of this notice is to establish final effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources in the phosphate manufacturing category of point sources, by amending 40 CFR Chapter I, Subchapter N, to add a new Part 422. This final rulemaking is promulgated pursuant to sections 301, 304 (b) and (c), 306 (b) and (c) and 307(c) of the Federal Water-Pollution Control Act, as amended, (the Act); 33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316 (b) and (c) and 1317(c) 86 Stat. 816 et seq.; Pub. L. 92-500. Regulations regarding cooling water intake structures for all categories of point sources under section 316(b) of the Act will be promulgated in 40 CFR Part 402.

In addition, the EPA is simultaneously proposing a separate provision which appears in the proposed rules section of the FEDERAL REGISTER, stating the application of the limitations and standards set forth below to users of publicly owned treatment works which are subject to pretreatment standards under section 307(b) of the Act. The basis of that proposed regulation is set forth in the associated notice of proposed rulemaking.

The legal basis, methodology and factual conclusions which support promulgation of this regulation were set forth in substantial detail in the notice of public review procedures published August 6, 1973 (38 FR 21202) and in the notice of proposed rulemaking for the phosphate manufacturing category. In addition, the regulations as proposed were supported by two other documents: (1) The document entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the PHOSPHOROUS DERIVED CHEMICALS Segment of the Phosphate Manufacturing Point Source Category" (August 1973) and (2) the document entitled "Economic Analysis of Proposed Effluent Guidelines, The Industrial Phosphate Industry" (August 1973). Both of these documents were made available to the public and circulated to interested persons at approximately the time of publication of the notice of proposed rulemaking.

Interested persons were invited to

participate in the rulemaking by submitting written comments within 30 days from the date of publication. Prior public participation in the form of solicited comments and responses from the States, Federal agencies, and other interested parties were described in the preamble to the proposed regulation. The EPA has considered carefully all of the comments received and a discussion of these comments with the Agency's response there-to follows.

The regulation as promulgated contains some significant departures from the proposed regulation. The following discussion outlines the reasons why these changes were made and why other suggested changes were not made.

(a) Summary of comments.

The following responded to the request for written comments contained in the preamble to the proposed regulation: Mobil Oil Corporation; FMC Corporation; Manufacturing Chemists Association; Stauffer Chemical Company; Hooker Industrial Chemicals; University of Florida; Institute of Food and Agricultural Sciences; Passaic Valley Sewerage Commissioners; County Sanitation District of Los Angeles County; U.S. Department of Commerce; and Monsanto Industrial Chemicals Company. Each of the comments received was carefully reviewed and analyzed. The following is a summary of the significant comments and the Agency's response to those comments.

(1) It was stated by several commenters that a no discharge guideline legally could not be applied until 1985.

EPA has determined that in the case of certain subcategories of the phosphate manufacturing category, either the best practicable control technology currently available or the best available technology economically achievable is the total recirculation of process waste water. In section 101(a)(2) of the Act, Congress established as a national goal the elimination of the discharge of pollutants into navigable waters by 1985. However, Congress also set requirements for technology based standards in sections 301, 304(b) and 306 which require the maximum degree of reduction of pollutant discharges prior to 1985, which is consistent with the technical and economic factors to be taken into account under sections 304(b) and 306 of the Act (notably, standards are to be set for 1977 and 1983 compliance, but no regulations are to be promulgated for 1985). The Agency will require the effluent reduction attainable by the best practicable control technology when establishing regulations under section 304(b) of the Act whether that reduction is to some degree of permitted discharge or down to no discharge.

(2) It was commented that best practicable control technology currently available should be based on a large number of plants if not the entire industry.

The Agency defines best practicable control technology currently available to be the average of the best existing performance by plants of various sizes, ages and unit processes within each industrial

category or subcategory. This average is not based upon a broad range of plants within an industrial category or subcategory, but is based upon performance levels achieved by exemplary plants. In those industrial categories where present control and treatment practices are uniformly inadequate, a higher level of control than any currently in place may be required if the technology to achieve such higher level can be practicably applied by July 1, 1977. Thus best practicable control technology currently available may be based on a few, one or no exemplary plants within that industrial category.

(3) Several commenters pointed out that runoff cannot be kept out of treatment ponds in some terrain and that a state of no discharge cannot be met during periods of heavy rainfall.

Treatment ponds can be built or modified to minimize, if not eliminate, intrusion of storm runoff originating outside of the pond retaining walls. Such ponds can also have sufficient free board as to retain rainfall. Those subcategories which employ treatment ponds are water consuming processes which can utilize the captured rainfall. Hence, there should be no need to discharge pond water.

(4) It was mentioned that the recycle of process waste water for food grade calcium phosphates would cause the Food and Drug Administration (FDA) specifications for process water to be violated.

Water is used in the manufacture of food grade calcium phosphates for reasons of transport or homogeneity, but not for purification. Hence the waste water contains the product, but nothing harmful to the product, which is what the FDA specifications are designed to protect.

The problem of segregation of waste waters, water balances, and storm water runoff, however, are sufficiently great that the industry will not be able to achieve total recycle by 1977 and yet meet FDA specifications. A discharge will therefore be allowed after suitable treatment as demonstrated in the Development Document.

(5) It was suggested that a limitation for dissolved solids be dropped for best practicable control technology currently available, since in the concentration range of the constituents involved, technology to achieve the proposed degree of control does not exist.

The limitation proposed was based on the raw waste load and was not intended to force treatment of dissolved solids. The limitation was intended to prohibit additional dissolved solids from being discharged. However, due to variability in the process this limitation may require such treatment. Therefore, the limitation on dissolved solids is replaced by limits on specific dissolved constituents that are considered to be the principal pollutants or characteristics to be controlled.

(6) It was suggested that the limits proposed by the Effluent Standards and Water Quality Information Advisory Committee (ESWQIAC) for the phos-

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phorus production subcategory be used.

The ESWQIAC limits include two additional phosphorus plants as exemplary. EPA has since accepted these plants as exhibiting best practicable control technology and has allowed a discharge based upon the data in the Development Document for the treatment capabilities of these plants. Therefore, although the Agency does not agree with the underlying rationale for establishing the ESWQIAC limits, the data in the Development Document does support the specific limits proposed by ESWQIAC.

(7) It was requested that discharges to publicly owned treatment works be allowed.

Pretreatment and discharge of waste waters to publicly owned treatment works from existing sources in the phosphate category are covered in the pretreatment guidelines that are proposed at the time this limitation is promulgated. Comments relating to existing sources should be directed to that regulation. For new sources the Agency considers the process waste water constituents from the phosphorus production and phosphorus consuming subcategories to be incompatible with publicly owned treatment works, and that the treatment technology that has been described in Section VII of the Development Document can achieve no discharge of process waste water pollutants to either navigable waters or to publicly owned treatment works.

The principal process waste water pollutant for the phosphate subcategory is phosphate, which cannot be adequately treated by primary or secondary treatment works. Phosphate, however, is considered to be compatible with publicly owned treatment works designed, constructed and operated to achieve optimal removal of dissolved phosphate, and a discharge to such treatment works will be allowed.

(8) Several commenters considered the capital costs of the model treatment systems to be underestimated and that the economic impact is understated.

The Agency has recalculated, in Section VIII of the Development Document, the cost information on model treatment systems as the result of additional data submitted by industry. The calculated changes do not affect the conclusions of the economic analysis, since the percentage increase in capital cost is not significant.

(9) It was stated that some plants were incorrectly cited as to whether they were achieving no discharge or not.

The necessary qualifiers were added to the descriptions in the Development Document of those plants that were disputed. The changes that were made involved treatment of certain portions of the process waste water and do not substantially affect the overall conclusions of the Development Document.

(10) The general comment was made that zero discharge cannot be achieved for some products.

The Agency has reevaluated the data

and is allowing a discharge for phosphorus and food grade calcium phosphates production for the 1977 limitation for the reasons given in comments (4) and (6). The Agency believes the technology exists to substantiate a no discharge of process waste water limitations for the remaining manufacturing processes.

(11) A range of values was recommended rather than a single value for each parameter.

The Agency considers that the limitations already represent ranges, taking into account differences in process, age, size and other factors. Subcategorization has been done to take these factors into account with different limitations for each subcategory. Within subcategories, excursions to the limitations have been made for certain manufacturing segments or products, constituting a wider range. Each numerical limitation represents a maximum average of daily values over a given period of time. This in effect represents a range from zero up to the specific limitation. A maximum variation is also given for each maximum average limitation. The Agency considers an upper and lower limitation to be somewhat meaningless since the actual range would be from zero to the upper limitation. Thus, in effect, the argument becomes one of making the EPA limitations less severe, since it has been suggested that the EPA limitations should be the lower limits. The EPA limitations are achievable and currently available.

(12) One commenter stated that there is no correlation of contractor validation data with data or conclusions contained in the Development Document.

Data calculated from samples collected by the contractor were not primarily intended to form the basis of a limitation. The validation data was mainly used by the contractor to determine if existing data can be correctly used to establish limitations. Such a correlation does not appear in the Development Document, but the raw data may be reviewed at the EPA Information Center, Room 227, West Tower, Waterside Mall, Washington, D.C. Only the data that appears in the Development Document was used in formulating the effluent limitations.

(13) It was stated that the evaporation of PCl_3 and $POCl_3$ process waste waters would require an excessive amount of energy.

The 1983 limitations for the manufacture of PCl_3 and $POCl_3$ are no discharge of process waste water pollutants which can be accomplished by maximum waste water recycle and evaporation of the blowdown. The Agency believes that sufficient time exists for each plant to be examined by the industry in order to minimize water usage, maximize solar evaporation and thus minimize power usage.

(14) It was pointed out that percolation can occur from waste water ponds. Infiltration of pond water to ground water cannot be controlled by this regulation. Possible problems have been pointed out in the preamble to the proposed regulation (38 FR 24470) and

methods of correction have been suggested.

(15) The comment was made that no discharge of process waste water pollutants is an impractical limitation because the methods of analysis are not sufficiently sensitive.

Where no discharge of process waste water pollutants is prescribed, model treatment systems are described in the Development Document in which no process waste waters are discharged, hence no process waste waters pollutants. For the purpose of determining if process waste water pollutants have contaminated other allowable discharges, this limitation is considered to be the detectable limit of the appropriate analytical method.

(16) It was suggested that no discharge of process waste water pollutants should mean no discharge that would degrade the quality of the receiving stream.

The Act is quite specific in stating the difference between limitations based on treatment technology and limitations handed on a case by case basis in order to insure that water quality standards are attained. The limitations promulgated in this regulation are technology based and independent of water quality standards, as is the intent of the Act.

(17) It was suggested that concentrations (mg/l) should be used with instantaneous maximum values instead of production based limitations.

Production based limitations such as kg of pollutant per kkg of product insure that dilution is not practiced. Daily maximum values are also promulgated.

(18) One commenter stated that phosphate limitations for the phosphate industry are unduly restrictive when compared to phosphate limitations for publicly owned treatment works.

The Act establishes separate time tables for industrial and municipal sources. Limitations for phosphate discharges from publicly owned treatment works will be proposed at a later date. However, effluent guidelines for industrial sources are to be based on the best practicable, best available, and best demonstrated technologies for each separate category and separate economic considerations for each category.

(19) One company agreed with the proposed limitation for the manufacture of phosphoric acid, phosphorus trichloride and phosphorous oxychloride.

(20) Another company suggested that no discharge of process waste water pollutants for the manufacture of phosphorus, sodium tripolyphosphate and food grade calcium phosphate is the best available technology rather than the best practicable control technology.

The Agency has reviewed the data and agrees that a discharge resulting from the manufacture of phosphorus and food grade calcium phosphate should be allowed for the 1977 limitations for the reasons listed in comments (4) and (6). However no discharge of process waste water pollutants still qualifies as best practicable control technology currently

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available for the manufacture of sodium tripolyphosphate.

(b) Revision of the proposed regulation prior to promulgation.

As a result of public comments and continuing review and evaluation of the proposed regulation by the EPA, the following changes have been made in the regulation.

(1) Minor adjustments have been made to reflect the fact that an increased number of definitions and analytical methods have been included in 40 CFR 401 and are incorporated by reference in 40 CFR 401 and are incorporated by reference in these subparts.

(2) A discharge will be allowed for the 1977 limitation for the phosphorus production subcategory. This change was made in response to comments (2), (6), (10) and (20) in section (a) above. The limitations are based upon two plants that discharge process waste water from treatment facilities exhibiting exemplary performance.

(3) The total dissolved solids limitations for the manufacture of phosphorus trichloride and phosphorus oxychloride have been replaced with limitations on specific dissolved species. This change was made in response to comment (5) in section (a) above.

(4) A discharge will be allowed for the 1977 limitation for the manufacture of food grade calcium phosphate. The reasons for this change are listed in comments (4), (6) and (20). The limitations are based upon the volume of water used in the process and the technological capability of treating suspended solids and total phosphorus.

(5) Section 304(b)(1)(B) of the Act provides for "guidelines" to implement the uniform national standards of Section 301(b)(1)(A). Thus Congress recognized that some flexibility was necessary in order to take into account the complexity of the industrial world with respect to the practicability of pollution control technology. In conformity with the Congressional intent and in recognition of the possible failure of these regulations to account for all factors bearing on the practicability of control technology, it was concluded that some provision was needed to authorize flexibility in the strict application of the limitations contained in the regulation where required by special circumstances applicable to individual dischargers. Accordingly, a provision allowing flexibility in the application of the limitations representing best practicable control technology currently available has been added to each subpart, to account for special circumstances that may not have been adequately accounted for when these regulations were developed.

(c) Economic impact.

The changes that were made to the proposed regulations for the phosphate category do not substantially affect the initial economic analysis. These changes center about the feasibility of recycling treated process waste water rather than different treatment systems. Additional cost data was received from the phos-

phate manufacturing industry, and a careful review of the costs of alternate treatment technologies was performed. Appropriate upward changes to the cost estimates were made in Section VIII of the Development Document. These changes likewise do not affect the conclusions of the economic impact study, since the cost increases are minimal.

(d) Cost-benefit analysis.

The detrimental effects of the constituents of waste waters now discharged by point sources within the phosphorus production subcategory, phosphorus consuming subcategory and the phosphate subcategory of the phosphate manufacturing point source category are discussed in Section VI of the report entitled "Development Document for Effluent Limitations Guidelines for the PHOSPHORUS DERIVED CHEMICALS Manufacturing Segment of the Phosphate Manufacturing Point Source Category" (February 1974). It is not feasible to quantify in economic terms, particularly on a national basis, the costs resulting from the discharge of these pollutants to our Nation's waterways. Nevertheless, as indicated in Section VI, the pollutants discharged have substantial and damaging impacts on the quality of water and therefore on its capacity to support healthy populations of wildlife, fish and other aquatic wildlife and on its suitability for industrial, recreational and drinking water supply uses.

The total cost of implementing the effluent limitations guidelines includes the direct capital and operating costs of the pollution control technology employed to achieve compliance and the indirect economic and environmental costs identified in Section VIII and in the supplementary report entitled "Economic Analysis of Proposed Effluent Guidelines for the INDUSTRIAL PHOSPHATE INDUSTRY" (August 1973). Implementing the effluent limitations guidelines will substantially reduce the environmental harm which would otherwise be attributable to the continued discharge of polluted waste waters from existing and newly constructed plants in the phosphate manufacturing industry. The Agency believes that the benefits of thus reducing the pollutants discharged justify the associated costs which, though substantial in absolute terms, represent a relatively small percentage of the total capital investment in the industry.

(e) Publication of information on processes, procedures or operating methods which result in the elimination or reduction of the discharge of pollutants.

In conformance with the requirements of section 304(c), a manual entitled, "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the PHOSPHORUS DERIVED CHEMICALS Segment of the Phosphate Manufacturing Point Source Category," has been published and is available for purchase from the Government Printing Office, Washington, D.C. 20401, for a nominal fee.

(f) Final rulemaking.

In consideration of the foregoing, 40

CFR Chapter I, Subchapter N is hereby amended by adding a new Part 422, Phos-

phate Manufacturing Point Source Category, to read as set forth below. This final regulation is promulgated as set forth below and shall be effective April 22, 1974.

Dated: January 31, 1974.

JOHN QUARLES,
Acting Administrator.

Subpart A—Phosphorus Production Subcategory
Sec.

- 422.10 Applicability; description of the phosphorus production subcategory.
- 422.11 Specialized definitions.
- 422.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 422.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 422.14 Reserved.
- 422.15 Standards of performance for new sources.
- 422.16 Pretreatment standards for new sources.

Subpart B—Phosphorus Consuming Subcategory

- 422.20 Applicability; description of the phosphorus consuming subcategory.
- 422.21 Specialized definitions.
- 422.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 422.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 422.24 Reserved.
- 422.25 Standards of performance for new sources.
- 422.26 Pretreatment standards for new sources.

Subpart C—Phosphate Subcategory

- 422.30 Applicability; description of the phosphate subcategory.
- 422.31 Specialized definitions.
- 422.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 422.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 422.34 Reserved.
- 422.35 Standards of performance for new sources.
- 422.36 Pretreatment standards for new sources.

Subpart A—Phosphorus Production
Subcategory

- § 422.10 Applicability; description of the phosphorus production subcategory.

The provisions of this subpart are applicable to discharges of pollutants re-

sulting from the production of phosphorus and ferrophosphorus by smelting of phosphate ore.

§ 422.11 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

§ 422.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
	Metric units (kg, kg of product)	
TSS.....	1.0	0.5
Total phosphorus.....	.30	.15
Fluoride.....	.10	.05
Elemental phosphorus.....	No detectable quantity.	
pH.....	Within the range 6.0 to 9.0.	
	English units (lb, 1,000 lb of product)	
TSS.....	1.0	0.5
Total phosphorus.....	.30	.15
Fluoride.....	.10	.05
Elemental phosphorus.....	No detectable quantity.	
pH.....	Within the range 6.0 to 9.0.	

§ 422.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable: there shall be no discharge of process waste water pollutants to navigable waters.

§ 422.14 [Reserved]

§ 422.15 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties which may be discharged by a new source subject to the provisions of this subpart: there shall be no discharge of process waste water pollutants to navigable waters.

§ 422.16 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the phosphorus production subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR Part 128, except that, for the purpose of this section, § 128.133 of this title shall be amended to read as follows:

"In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 422.15; provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the

pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

Subpart B—Phosphorus Consuming Subcategory

§ 422.20 Applicability; description of the phosphorus consuming subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the manufacture of phosphoric acid, phosphorus pentoxide, phosphorus pentasulfide, phosphorus trichloride, and phosphorus oxychloride directly from elemental phosphorus. The production of phosphorus trichloride and phosphorus oxychloride creates waste water pollutants not completely amenable to the procedures utilized for best practicable control technology currently available. The standards set for phosphorus trichloride manufacture and phosphorus oxychloride manufacture, accordingly, must differ from the rest of the subcategory at this level of treatment.

§ 422.21 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR Part 401 shall apply to this subpart.

§ 422.22 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that

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facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(a) There shall be no discharge of process waste water pollutants to navigable waters from the manufacture of phosphoric acid, phosphorus pentoxide, or phosphorus pentasulfide.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged in process waste water from phosphorus trichloride manufacturing on the basis of production:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kg/kg of product)		
TSS.....	1.4	0.7
Total phosphorus...	1.6	.8
Arsenic.....	.0001	.0005
Elemental phosphorus.....	No detectable quantity.	
pH.....	Within the range 6.0 to 9.0.	
English units (lb/1,000 lb of product)		
TSS.....	1.4	0.7
Total phosphorus...	1.6	0.8
Arsenic.....	.0001	.0005
Elemental phosphorus.....	No detectable quantity.	
pH.....	Within the range 6.0 to 9.0.	

(c) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged in process waste water from phosphorus oxychloride manufacturing on the basis of production:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
Metric units (kg/kg of product)		
TSS.....	0.3	0.15
Total phosphorus.....	.31	.17
pH.....	Within the range 6.0 to 9.0.	
English units (lb/1,000 lb of product)		
TSS.....	0.3	0.15
Total phosphorus.....	.31	.17
pH.....	Within the range 6.0 to 9.0.	

§ 422.23 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable: there shall be no discharge to navigable waters of process waste water pollutants to resulting from the manufacture of phosphoric acid, phosphorus pentoxide, phosphorus pentasulfide, phosphorus trichloride or phosphorus oxychloride.

§ 422.21 [Reserved]

§ 422.25 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties which may be discharged by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

§ 422.26 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the phosphorus consuming subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR Part 128, except that, for the purpose of this section, § 128.133 of this title shall be amended to read as follows:

"In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 422.25; provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

Subpart C—Phosphate Subcategory

§ 422.30 Applicability; description of the phosphate subcategory.

The provisions of this subpart are applicable to discharges of pollutants resulting from the manufacture of sodium tripolyphosphate, animal feed grade, calcium phosphate and human food grade calcium phosphate from phosphoric acid. The production of human food grade calcium phosphate creates waste water pollutants not completely amenable to the procedures utilized for best practicable control technology currently available. The standards set for human food grade calcium phosphates accordingly must

differ from the rest of the subcategory at this level of treatment.

§ 422.31 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in 40 CFR 401 shall apply to this subpart.

§ 422.32 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharge or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(a) There shall be no discharge of process waste water pollutants to navigable waters from the manufacture of sodium tripolyphosphate, or animal feed grade calcium phosphate.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this paragraph, which may be discharged in process waste water from human food grade calcium phosphate manufacturing based on production:

App. 1318

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed
Metric units (kg/kg of product)		
TSS.....	0.12	0.06
Total phosphorus.....	.06	.03
pH.....	Within the range 6.0 to 9.0.	
English units (lb/1,000 lb of product)		
TSS.....	0.12	0.06
Total phosphorus.....	.06	.03
pH.....	Within the range 6.0 to 9.0.	

§ 422.33 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the the quantity or quality of pollutants or pollutant properties which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology

economically achievable: There shall be no discharge to navigable waters of process waste water pollutants resulting from the manufacture of sodium tripolyphosphate, animal feed grade calcium phosphate, or human food grade calcium phosphate.

§ 422.34 [Reserved]

§ 422.35 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties which may be discharged by a new source subject to the provisions of this subpart: There shall be no discharge of process waste water pollutants to navigable waters.

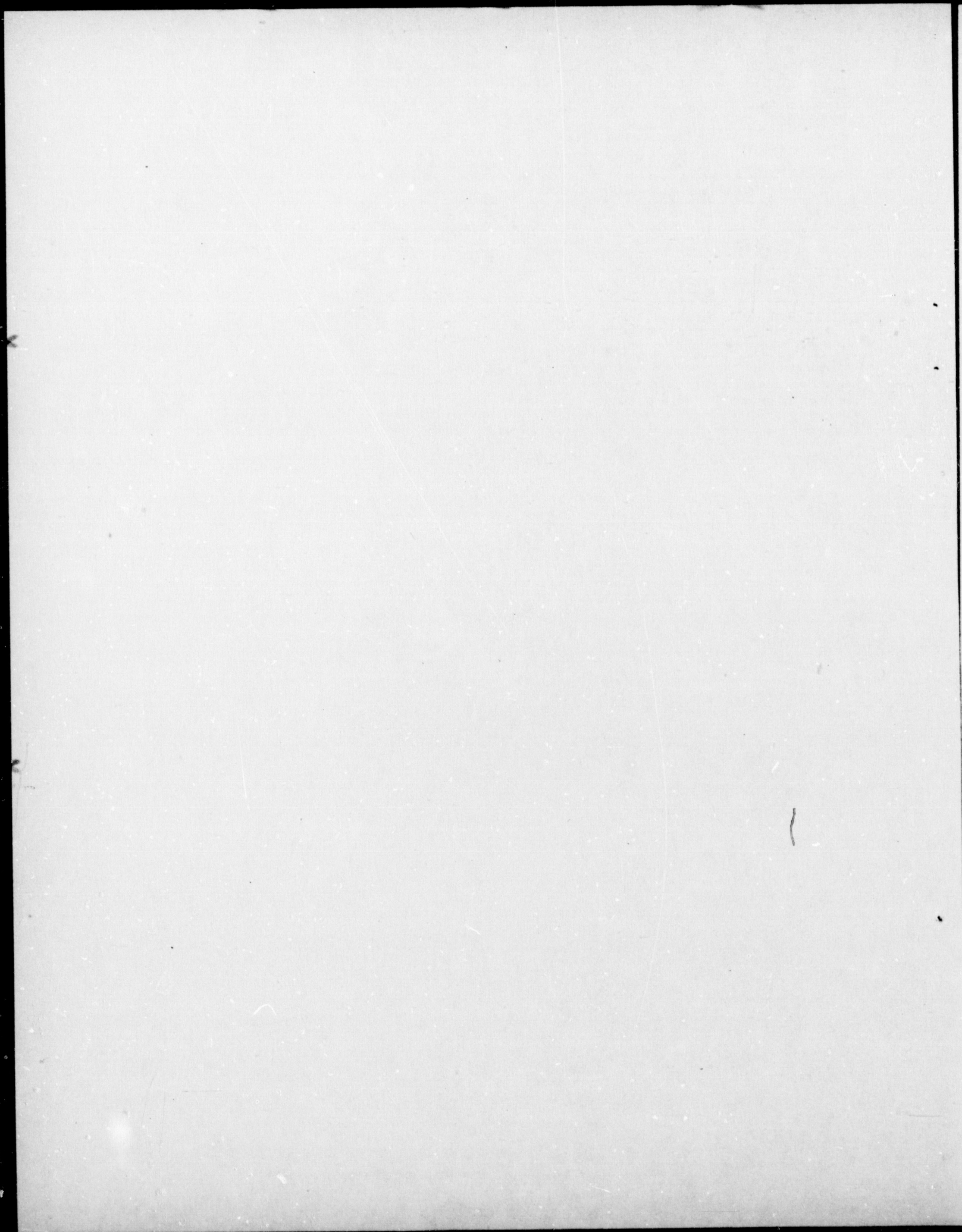
§ 422.36 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the phosphate subcategory, which is a user of a publicly owned treatment works (and which would be

a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in 40 CFR Part 128, except that process waste waters from this subcategory are not considered to be incompatible with publicly owned treatment works designed, constructed and operated to remove dissolved phosphate and, for the purpose of this section, § 128.133 of this title shall be amended to read as follows:

"In addition to the prohibitions set forth in 40 CFR 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in 40 CFR 422.35; provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

[FR Doc.74-196 Filed 2-19-74; 8:45 am]



APPENDIX C

Computation of Energy Requirements for Evaporation of PCl_3 and POCl_3 Effluent

EPA, in computing the energy usage given in the Development Document, App. 1767 apparently forgot to convert from English tons to metric tons (1000 kilograms) by multiplying the former by 1.1. With this correction, EPA's energy requirements for PCl_3 plants would be 322 1000 kilowatt hours (KWH) per metric ton (Kkg) rather than 293 KWH/Kkg; energy usage for POCl_3 plants would be 160 KWH/Kkg rather than 146 KWH/Kkg. Once that correction is made, standard engineering calculations demonstrate that EPA's energy figures are for one-tenth the flow given by EPA for PCl_3 and POCl_3 plants.

Table 19 Development Document, App. 1767, lists treatment energy requirements for zero discharge at a PCl_3 plant as 293 KWH/Kkg of product. The total waste flow without refrigeration given by EPA is 1200 gallons per ton. The thermal energy to evaporate 1200 gallons of waste in a single effect evaporator, using EPA's figure of 1000 BTU's for each pound of water evaporated, is:

$$\frac{1200 \text{ gallons}}{\text{ton}} \times 8.33 \frac{\text{lb.}}{\text{gallons}} \times 1000 \frac{\text{BTU}}{\text{lb}} = 9,996,000 \text{ BTU/Ton}$$

or in terms of electrical energy:

$$.000293 \frac{\text{KWH}}{\text{BTU}} \times 9,996,000 \frac{\text{BTU}}{\text{Ton}} \times 1.1 \frac{\text{ton}}{\text{Kkg}} = 3221.7 \frac{\text{KWH}}{\text{Ton}}$$

The corrected figure of 322 KWH/Kkg is less than one tenth of this value, and therefore must be evaporation of one-tenth of the flow

cost estimates in the final Development Document did not affect the conclusions of the economic impact study, since cost increases were minimal and changes to proposed regulations did not affect the initial economic analysis (App. 1315, 1316). The final "Economic Analysis of the Effluent Guidelines" has issued, dated November 1974. This document, which contains only minor changes from the Economic Analysis of the proposed regulations will be added as a supplement to the certified record.

D. The Agency will reconsider the 1983 effluent limitation guideline for phosphorus trichloride and phosphorus oxychloride. - The Agency does not concede that there is "no basis" in the record for applying a technology to the subcategory which would result in no discharge of process waste water pollutants. At length in the Development Document, App. 1782-1785, the Agency provides a reasoned elaboration of the technology which is undeniably available for reduction of waste water and

ultimate evaporation. The Agency also believes that such technology is economically achievable (App. 1784). In retrospect with a further period of review (after the initial condensed rulemaking period), the Agency is disposed to re-evaluate its determination that a limitation of no discharge of process waste water is applicable in 1983 for the subcategory of phosphorus trichloride and phosphorus oxychloride. The Agency has already recognized that problems of excess power usage might be a problem. Preamble, Final Effluent Guidelines, 39 Fed. Reg. 1315, Feb. 20, 1974, App. 1315. The last step of evaporation for the purpose of preventing a discharge of dissolved chloride may not be justified. The Agency, therefore, intends to issue an amendment to the 1983 effluent guidelines for phosphorus trichloride and phosphorus oxychloride allowing a discharge but still aiming for the 1985 goal of elimination of pollutant discharges.

E. The 1983 effluent limitations guidelines for phosphorus pentasulfide plants is valid. - The 1983 Effluent Guidelines based on best available technology economically achievable is no discharge of process waste water pollutants (40 C.F.R. sec. 422.22, App. 1317-1318) because the technology is available and economically achievable. The Agency's Development Document and even Hooker's brief are witness to the fact that the Agency explored many treatment alternatives by which this industry could achieve no discharge of waste water pollutants.

(1) Technology to achieve no discharge has been demonstrated and is available. For the phosphorus pentasulfide industry, alternatives for treatment are no additional treatment; reduction of waste water discharge by recycle of its scrubber water; no discharge of waste water achieved by total recycle; and no discharge of waste water achieved by the use of inert-atmosphere casting of the phosphorus pentasulfide (App. 1751, 1774, 1781). The Agency is not authorized nor has it attempted to dictate which treatment methodology is to be applied. What the record shows is that the Agency followed the methodology which it claimed it would follow in establishing the effluent guidelines. The full range of control and treatment technologies

existing within each subcategory was examined and each distinct control and treatment technology, including both in-plant and end-of-process technologies, which are in existence or capable of being designed for each subcategory, were identified (App. 1656). The establishment of no-discharge limitation based on the technologies of inert casting and total recycle is perfectly consistent with the criteria upon which the Agency is to establish best available technology economically achievable. Best available technology economically achievable places equal emphasis on in-plant control and treatment techniques employed at the end-of-production line (App. 1780). Therefore, it is not necessary for the Agency to have found either treatment alternative of inert casting or total recycle in operation at a facility to have a no-discharge limitation based on these technologies.

If the Agency had been required to base the effluent limitations on technology in an existing plant, this would have been difficult in view of the status of the phosphorus pentasulfide industry. Existing plants which produce this product have rudimentary pollution control devices (App. 444, 1651). A typical plant has not yet instituted any treatment of acidic

wastes (App. 1757). The plants which were investigated in the field study did not have any treatment systems for such wastes in operation (App. 434, 444). Obviously, the Agency is not precluded from establishing a no-discharge limitation based on available technology because that industry has failed to utilize that available technology. As Hooker's brief points out (p. 66), its Columbus, Mississippi, plant is only now installing a scrubber system, a technology which has been widely available (App. 440). In addition, the sampling base for analysis of treatment was small. Only five phosphorus pentasulfide plants are in this country (App. 1661). Stauffer Chemical Company, which is one of these producers, would not cooperate with the Agency's contractor in the development of the effluent guidelines. That company asserted that none of its plants in this category employed control technology which might even be considered notable. If the record is lacking in any collaboration, it is due to the lack of cooperation from the industry.

However, the record does not support the regulations which are based on adequate documentation and review of the technology that is readily applied to attain the no-discharge effluent limitation for 1983.

(2) Inert-atmosphere or vacuum casting is available and feasible as a basis for the no-discharge requirement for 1983. Inert-atmosphere casting of phosphorus pentasulfide is offered as a treatment technique (App. 1751, 1760) because it is so readily available as a demonstrated in-process technique leading to the elimination of pollutant waste water (App. 1050, 1051). If there is a lack of extensive discussion of this treatment technique, it is simply because it is so widely available. The technology of vacuum casting is used in the same facility where molten phosphorus pentasulfide is cast. A description of the phosphorus pentasulfide industry provides that "batches from multiple reactors are forced into an electrically heated * * * holding tank by nitrogen pressure.* * * The liquid P_2S_5 that is to be purified may be vacuumed distilled * * * in a continuous system" (App. 1677; see also App. 1678). The synthesis of P_2S_5 must be performed completely in the absence of air and water in whole or in part (App. 1691). The Agency's suggestion that an inert-atmosphere of nitrogen be used to eliminate water usage is not a trip in fantasy but a trip in the ordinary routine. "Comparatively pure nitrogen is one that is relatively cheap. It finds a number of industrial applications

because of two important properties, a low boiling point * * * and its inertness * * *." R.E. Kirk and D. F. Othmer, Encyclopedia of Chemical Technology, Interscience, N.Y., 2d ed., vol. 13, at 1861 (1966); App. 1792, References #12. This chemical technology handbook further provides that in the chemical industry "nitrogen is used advantageously in a number of chemical processes to exclude oxygen or moisture or as a diluent." This reference extensively describes how nitrogen as an inert-atmosphere is widely used and has been used for a number of years. If that is not a sufficient guide to Hooker, as to the meaning of "various state-of-the-art techniques available" (Development Document, App. 1751), the Encyclopedia also discusses the use of nitrogen and other inert gases in the handling of sodium (Id. at 439-499, vol. 18; Development Document, App. 1792). If the Development Document is lacking in any extensive discussion of the use of an inert-atmosphere, it is only because it is an obvious technology.

Hooker attempts to obscure the real issue that the industry is far behind in treating pollution problems, by urging that the Agency's suggested use of vacuum casting rests on the premise that the sole source of process water is scrubber liquor

(Br. 68, Development Document, App. 1774). Hooker has completely misread the statement in the Development Document that the sole source of process waters is scrubber water. The Agency did, in fact, extensively explore other water uses in the process and other sources of effluent. The Development Document discusses the use of washwater for reaction vessels and shipping containers (App. 1660, 1696, 1732). EPA's own description of process noted the dust and fumes from crushing and product purification operations (Development Document, App. 1677). What Hooker ignores is the answer offered to eliminate or control these effluents. The Development Document refers again and again to the use of dry dust collection (App. 1729):

A drastic reduction in the aqueous waste load may be made by replacing wet scrubbing systems with baghouses, or alternatively, by placing cyclone dust collectors upstream of wet scrubbers. This approach is feasible because baghouses have recently been improved in design to the point where operation and maintenance costs are not excessive, where solids collection efficiencies exceed those of wet scrubbers, and where operating temperature ranges have been extended with high-temperature media development.

Indeed, such dry dust collection systems provide an economic credit to the annual operating cost because of the recovery of material (App. 1759). Thus, the scrubbing of dust and

fumes from crushing can be eliminated by the use of dust collection systems at the same time that an inert-atmosphere is applied (Development Document, App. 1692, 1706, 1729, 1759). Finally, any problems which might be associated with water uses related to the cleaning of storage vessels and other containers will be solved with the redefinition of process water. Supra. Although such waste streams will require treatment, they will not come within the definition of process waste water. The effluent limitation guideline of no-discharge of process waste water is not in reference to these incidental waste streams.

(3) Total recycle technology is both available and demonstrated. Hooker asserts that the huge technological leap to total recycle has not been made in the phosphorus pentasulfide industry. This statement is a blatant admission by the industry that it is significantly behind in its efforts to treat for pollutants. Hooker's argument concerning total recycle boils down to one contention, i.e., a problem with scaling or a build-up in the system. Hooker obviously cannot argue against the other steps in the total recycle, suggested as a means of reaching no-discharge, because the other steps in the system are so readily available and feasible. The

lowering of the scrubber water rates with lime and the recycle of scrubber water are widely used methods of operation (App. 1707, 1728, 1759). The other steps in the total recycle technology are well documented. Lime or limestone neutralization of acid waste streams is standard practice in this industry (App. 1677). "It is readily apparent that lime treatment with excess lime not only neutralizes acidic waste waters from the phosphate manufacturing industry, but also demineralizes most waste waters by precipitating calcium salts. This then produces a solid waste which may be disposed of by land filling" (App. 1677). The only portion of the recycle technology proposed in the regulations which is under contention here is the "recycle tank overflow back to the process" (App. 1751). "Lime treatment and sedimentation to neutralize and to remove phosphate, sulfite and sulfate would permit total recycle" (App. 1774). The technology suggested by the Development Document is that any materials that might be created by a scaling problem would ultimately be removed as a solid, not as a liquid. The integrity of the no-discharge limitation would be maintained.

If Hooker's concern is the scaling problem from a build-up of the sulfates and sulfites from sulfur dioxide in the fumes (App. 1707), the answer is simple. As stated again and again throughout the Development Document, dry dust collectors are feasible, efficient, available to eliminate this scaling problem (App. 1692, 1706, 1729, 1759).

F. The 1977 effluent guideline for phosphorus pentasulfide will be reconsidered. - As discussed above, the technologies which essentially depend on changes within a process. They are not end-of-process modifications and end-of-process treatment facilities. While the effluent limitations which must be achieved by July 1, 1977, based on the application of the best practical control technology currently available, may include control technology within the process itself (App. 1768), the technologies described for achievement of no discharge in the phosphorus pentasulfide subcategory rely on in-process controls. Therefore, although the Agency considers the 1983 guidelines to be properly promulgated, an amendment will be proposed to revise the 1977 effluent guidelines for phosphorus pentasulfide manufacturers to allow a discharge, but one based on a rigorous end-of-the-pipe treatment program.

G. The 1977 and 1983 effluent limitation guidelines for sodium food grade tripolyphosphate and the 1983 effluent limitation guidelines for food grade calcium phosphate will be reconsidered. - The review of the record prompted by the instant petitions for review has revealed an insufficiency in the data base for developing effluent limitations guidelines for the food grade segment of STPP and calcium phosphate production. The Agency therefore intends to reconsider the 1977 and 1983 effluent guideline for sodium tripolyphosphate and the 1983 requirements for food grade calcium phosphate.

CONCLUSION

For the foregoing reasons, this Court has exclusive jurisdiction of these petitions to review agency action and should uphold the regulations at issue since they were promulgated in compliance with the Act and are supported by the record.

Respectfully submitted,

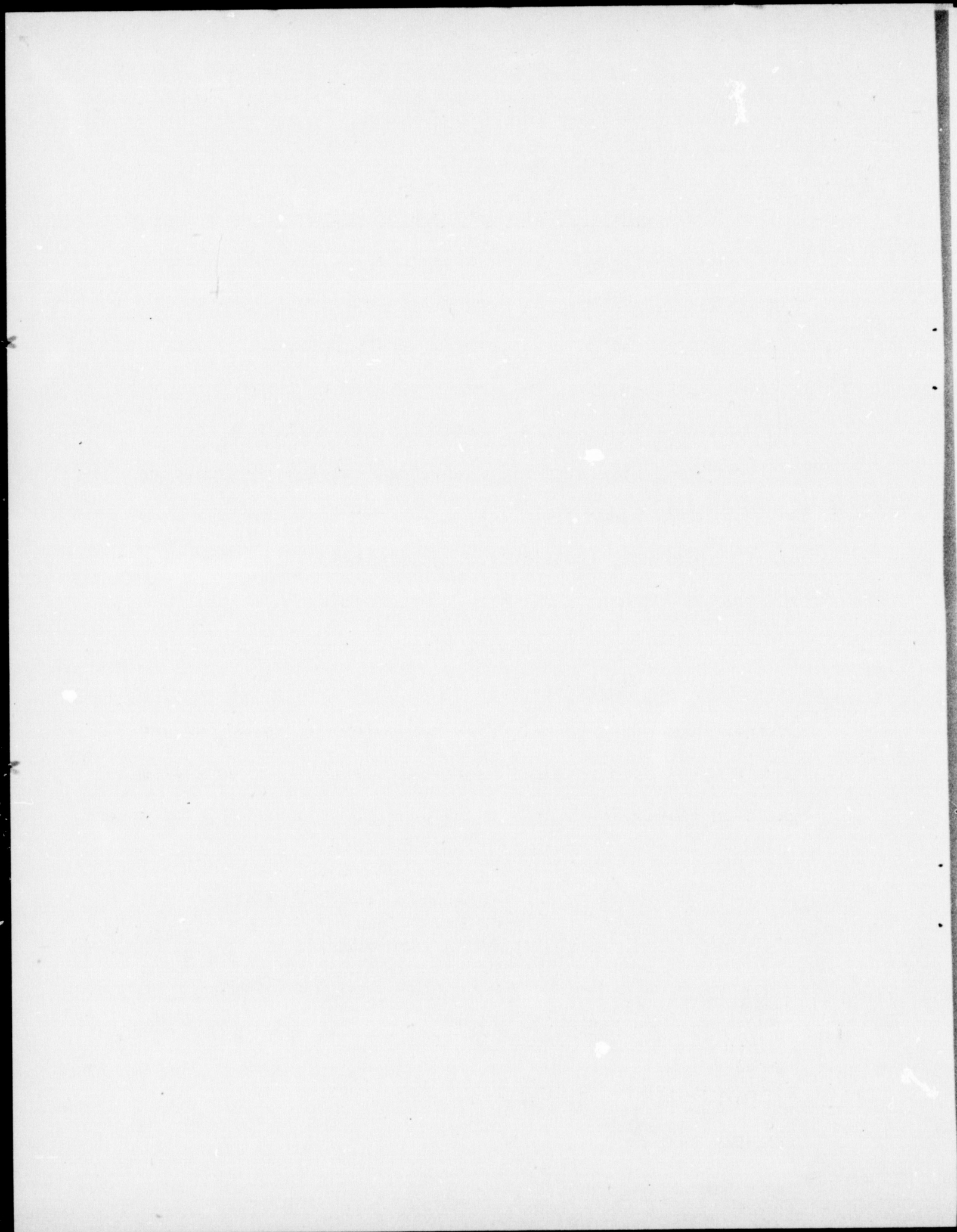
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NOVEMBER 1974



A P P E N D I X A

RELEVANT PARTS OF THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972, 86 STAT. 816, 33 U.S.C. SEC. 1251 ET SEQ. THE SECTIONS OF THE ORIGINAL ACT ARE INDICATED IN THE MARGIN.

Section 101 § 1251. Congressional declaration of goals and policy.

(a) The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this chapter—

(1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;

(2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;

(3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;

(4) it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;

(5) it is the national policy that areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State; and

(6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone, and the oceans.

(b) It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this chapter. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

(c) It is further the policy of Congress that the President, acting through the Secretary of State and such national and international organizations as he determines appropriate, shall take such action as may be necessary to insure that to the fullest extent possible all foreign countries shall take meaningful action for the prevention, reduction, and elimination of pollution in their waters and in international waters and for the achievement of goals regarding the elimination of discharge of pollutants and the improvement of water quality to at least the same extent as the United States does under its laws.

(d) Except as otherwise expressly provided in this chapter, the Administrator of the Environmental Protection Agency (hereinafter in this chapter called "Administrator") shall administer this chapter.

(e) Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. The Administrator, in cooperation with the States, shall develop and publish regulations specifying minimum guidelines for public participation in such processes.

(f) It is the national policy that to the maximum extent possible the procedures utilized for implementing this chapter shall encourage the drastic minimization of paperwork and interagency decision procedures, and the best use of available manpower and funds, so as to prevent needless duplication and unnecessary delays at all levels of government. (June 30, 1948, ch. 758, title I, § 101, as added Oct. 18, 1972, Pub. L. 92-500, § 2, 86 Stat. 816.)

* * * * *

Section 301

§ 1311. Effluent limitations.

(a) Illegality of pollutant discharges except in compliance with law.

Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

(b) Timetable for achievement of objectives.

In order to carry out the objective of this chapter there shall be achieved—

(1) (A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 1314(b) of this title, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 1317 of this title; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314(d)(1) of this title; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

(2) (A) not later than July 1, 1983, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 1325 of this title), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, or (ii) in the

case of the introduction of a pollutant into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, shall require compliance with any applicable pretreatment requirements and any other requirement under section 1317 of this title; and

(B) not later than July 1, 1983, compliance by all publicly owned treatment works with the requirements set forth in section 1281(g)(2)(A) of this title.

(c) Modification of timetable.

The Administrator may modify the requirements of subsection (b)(2)(A) of this section with respect to any point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

(d) Review and revision of effluent limitations.

Any effluent limitation required by paragraph (2) of subsection (b) of this section shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under such paragraph.

(e) All point discharge source application of effluent limitations.

Effluent limitations established pursuant to this section or section 1312 of this title shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this chapter.

(f) Illegality of discharge of radiological, chemical, or biological warfare agents or high-level radioactive waste.

Notwithstanding any other provisions of this chapter it shall be unlawful to discharge any radiological, chemical, or biological warfare agent or high-level radioactive waste into the navigable waters. (June 30, 1948, ch. 758, title III, § 301, as added Oct. 18, 1972, Pub. L. 92-500, § 2, 86 Stat. 844.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 1255, 1292, 1312, 1313, 1314, 1319, 1325, 1326, 1341, 1342, 1365, 1367, 1369 of this title.

Section
304

Section 302

§ 1312. Water quality related effluent limitations.

(a) Whenever, in the judgment of the Administrator, discharges of pollutants from a point source or group of point sources, with the application of effluent limitations required under section 1311(b)(2) of this title, would interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters which shall assure protection of public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water, effluent limitations (including alternative effluent control strategies) for such point source or sources shall be established which can reasonably be expected to contribute to the attainment or maintenance of such water quality.

(b) (1) Prior to establishment of any effluent limitation pursuant to subsection (a) of this section, the Administrator shall issue notice of intent to establish such limitation and within ninety days of such notice hold a public hearing to determine the relationship of the economic and social costs of achieving any such limitation or limitations, including any economic or social dislocation in the affected community or communities, to the social and economic benefits to be obtained (including the attainment of the objective of this chapter) and to determine whether or not such effluent limitations can be implemented with available technology or other alternative control strategies.

(2) If a person affected by such limitation demonstrates at such hearing that (whether or not such technology or other alternative control strategies are available) there is no reasonable relationship between the economic and social costs and the benefits to be obtained (including attainment of the objective of this chapter), such limitation shall not become effective and the Administrator shall adjust such limitation as it applies to such person.

(c) The establishment of effluent limitations under this section shall not operate to delay the application of any effluent limitation established under section 1311 of this title. (June 30, 1948, ch. 758, title III, § 302, as added Oct. 18, 1972, Pub. L. 92-500, § 2, 86 Stat. 846.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 1292, 1311, 1313, 1319, 1341, 1342, 1365, 1367, 1369 of this title.

* * * * *

§ 1311. Information and guidelines.

(a) Criteria development and publication.

(1) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after October 18, 1972 (and from time to time thereafter revise) criteria for water quality accurately reflecting the latest scientific knowledge (A) on the kind and extent of all identifiable effects on health and welfare including, but not limited to, plankton, fish, shellfish, wildlife, plant life, shorelines, beaches, esthetics, and recreation which may be expected from the presence of pollutants in any body of water, including ground water; (B) on the concentration and dispersal of pollutants, or their byproducts, through biological, physical, and chemical processes; and (C) on the effects of pollutants on biological community diversity, productivity, and stability, including information on the factors affecting rates of eutrophication and rates of organic and inorganic sedimentation for varying types of receiving waters.

(2) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall develop and publish, within one year after October 18, 1972 (and from time to time thereafter revise) information (A) on the factors necessary to restore and maintain the chemical, physical, and biological integrity of all navigable waters, ground waters, waters of the contiguous zone, and the oceans; (B) on the factors necessary for the protection and propagation of shellfish, fish, and wildlife for classes and categories of receiving waters and to allow recreational activities in and on the water; and (C) on the measurement and classification of water quality; and (D) for the purpose of section 1313 of this title, on and the identification of pollutants suitable for maximum daily load measurement correlated with the achievement of water quality objectives.

(3) Such criteria and information and revisions thereof shall be issued to the States and shall be published in the Federal Register and otherwise made available to the public.

(b) Effluent limitation guidelines.

For the purpose of adopting or revising effluent limitations under this chapter the Administrator shall, after consultation with appropriate Federal

Section 304 (continued)

and State agencies and other interested persons, publish within one year of October 18, 1972, regulations, providing guidelines for effluent limitations, and, at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall—

(1) (A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best practicable control technology currently available for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the control measures and practices to be applicable to point sources (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best practicable control technology currently available to comply with subsection (b)(1) of section 1311 of this title shall include consideration of the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, and shall also take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate;

(2) (A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods, and other alternatives for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the best measures and practices available to comply with subsection (b)(2) of section 1311 of this title to be applicable to any point source (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate; and

(3) identify control measures and practices available to eliminate the discharge of pollutants from categories and classes of point sources, taking into account the cost of achieving such elimination of the discharge of pollutants.

(c) Pollution discharge elimination procedures.

The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall issue to the States and appropriate water pollution control agencies within 270 days after October 18, 1972, and from time to time

thereafter, information on the processes, procedures, or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under section 1316 of this title. Such information shall include technical and other data, including costs, as are available on alternative methods of elimination or reduction of the discharge of pollutants. Such information, and revisions thereof, shall be published in the Federal Register and otherwise shall be made available to the public.

(d) Secondary treatment information; alternative waste treatment management techniques and systems.

(1) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall publish within sixty days after October 18, 1972 (and from time to time thereafter) information, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, on the degree of effluent reduction attainable through the application of secondary treatment.

(2) The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall publish within nine months after October 18, 1972 (and from time to time thereafter) information on alternative waste treatment management techniques and systems available to implement section 1281 of this title.

(e) Identification and evaluation of nonpoint sources of pollution; processes, procedures, and methods to control pollution.

The Administrator, after consultation with appropriate Federal and State agencies and other interested persons, shall issue to appropriate Federal agencies, the States, water pollution control agencies, and agencies designated under section 1288 of this title, within one year after October 18, 1972 (and from time to time thereafter) information including (1) guidelines for identifying and evaluating the nature and extent of nonpoint sources of pollutants, and (2) processes, procedures, and methods to control pollution resulting from—

(A) agricultural and silvicultural activities, including runoff from fields and crop and forest lands;

(B) mining activities, including runoff and siltation from new, currently operating, and abandoned surface and underground mines;

(C) all construction activity, including runoff from the facilities resulting from such construction;

(D) the disposal of pollutants in wells or in subsurface excavations;

(E) salt water intrusion resulting from reductions of fresh water flow from any cause, including extraction of ground water, irrigation, obstruction, and diversion; and

(F) changes in the movement, flow, or circulation of any navigable waters or ground waters, including changes caused by the construction of dams, levees, channels, causeways, or flow diversion facilities.

**Section
304
(continued)**

Such information and revisions thereof shall be published in the Federal Register and otherwise made available to the public.

(f) Guidelines for pretreatment of pollutants.

(1) For the purpose of assisting States in carrying out programs under section 1342 of this title, the Administrator shall publish, within one hundred and twenty days after October 18, 1972, and review at least annually thereafter and, if appropriate, revise guidelines for pretreatment of pollutants which he determines are not susceptible to treatment by publicly owned treatment works. Guidelines under this subsection shall be established to control and prevent the discharge into the navigable waters, the contiguous zone, or the ocean (either directly or through publicly owned treatment works) of any pollutant which interferes with, passes through, or otherwise is incompatible with such works.

(2) When publishing guidelines under this subsection, the Administrator shall designate the category or categories of treatment works to which the guidelines shall apply.

(g) Test procedures guidelines.

The Administrator shall, within one hundred and eighty days from October 18, 1972, promulgate guidelines establishing test procedures for the analysis of pollutants that shall include the factors which must be provided in any certification pursuant to section 1341 of this title or permit application pursuant to section 1342 of this title.

(h) Guidelines for monitoring, reporting, enforcement, funding, personnel, and manpower.

The Administrator shall (1) within sixty days after October 18, 1972, promulgate guidelines for the purpose of establishing uniform application forms and other minimum requirements for the acquisition of information from owners and operators of point-sources of discharge subject to any State program under section 1342 of this title, and (2) within sixty days from October 18, 1972, promulgate guidelines establishing the minimum procedural and other elements of any State program under section 1342 of this title, which shall include:

(A) monitoring requirements;

(B) reporting requirements (including procedures to make information available to the public);

(C) enforcement provisions; and

(D) funding, personnel qualifications, and manpower requirements (including a requirement that no board or body which approves permit applications or portions thereof shall include, as a member, any person who receives, or has during the previous two years received, a significant portion of his income directly or indirectly from permit holders or applicants for a permit).

(i) Restoration and enhancement of publicly owned fresh water lakes.

The Administrator shall, within 270 days after October 18, 1972 (and from time to time thereafter), issue such information on methods, procedures, and processes as may be appropriate to restore and enhance the quality of the Nation's publicly owned fresh water lakes.

(j) Agreements with Secretaries of Agriculture, Army, and Interior to provide maximum utilization of programs to achieve and maintain water quality; transfer of funds; authorization of appropriations.

(1) The Administrator shall, within six months from October 18, 1972, enter into agreements with the Secretary of Agriculture, the Secretary of the Army, and the Secretary of the Interior to provide for the maximum utilization of the appropriate programs authorized under other Federal law to be carried out by such Secretaries for the purpose of achieving and maintaining water quality through appropriate implementation of plans approved under section 1288 of this title.

(2) The Administrator, pursuant to any agreement under paragraph (1) of this subsection is authorized to transfer to the Secretary of Agriculture, the Secretary of the Army, or the Secretary of the Interior any funds appropriated under paragraph (3) of this subsection to supplement any funds otherwise appropriated to carry out appropriate programs authorized to be carried out by such Secretaries.

(3) There is authorized to be appropriated to carry out the provisions of this subsection, \$100,000,000 per fiscal year for the fiscal year ending June 30, 1973, and the fiscal year ending June 30, 1974. (June 30, 1948, ch. 758, title III, § 304, as added Oct. 18, 1972, Pub. L. 92-500, § 2, 86 Stat. 850.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 1255, 1311, 1313, 1315, 1342, 1369, 1374, 1376 of this title.

* * * * *

**Section
306**

§ 1316. National standards of performance.

(a) Definitions.

For purposes of this section:

(1) The term "standard of performance" means a standard for the control of the discharge of pollutants which reflect the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

(2) The term "new source" means any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under this section which will be applicable to such source, if such standard is thereafter promulgated in accordance with this section.

Section 306 (continued)

(3) The term "source" means any building, structure, facility, or installation from which there is or may be the discharge of pollutants.

(4) The term "owner or operator" means any person who owns, leases, operates, controls, or supervises a source.

(5) The term "construction" means any placement, assembly, or installation of facilities or equipment (including contractual obligations to purchase such facilities or equipment) at the premises where such equipment will be used, including preparation work at such premises.

(b) Categories of sources: Federal standards of performance for new sources.

(1)(A) The Administrator shall, within ninety days after October 18, 1972, publish (and from time to time thereafter shall revise) a list of categories of sources, which shall, at the minimum, include:

- pulp and paper mills;
- paperboard, builders paper and board mills;
- meat product and rendering processing;
- dairy product processing;
- grain mills;
- canned and preserved fruits and vegetables processing;
- canned and preserved seafood processing;
- sugar processing;
- textile mills;
- cement manufacturing;
- feedlots;
- electroplating;
- organic chemicals manufacturing;
- inorganic chemicals manufacturing;
- plastic and synthetic materials manufacturing;
- soap and detergent manufacturing;
- fertilizer manufacturing;
- petroleum refining;
- iron and steel manufacturing;
- nonferrous metals manufacturing;
- phosphate manufacturing;
- steam electric powerplants;
- ferroalloy manufacturing;
- leather tanning and finishing;
- glass and asbestos manufacturing;
- rubber processing; and
- timber products processing.

(B) As soon as practicable, but in no case more than one year, after a category of sources is included in a list under subparagraph (A) of this paragraph, the Administrator shall propose and publish regulations establishing Federal standards of performance for new sources within such category. The Administrator shall afford interested persons an opportunity for written comment on such proposed regulations. After considering such comments, he shall promulgate, within one hundred and twenty days after publication of such proposed regulations, such standards with such adjustments as he deems appropriate. The Administrator shall, from time to time, as technology and alternatives change, revise such standards following the procedure required by this subsection for promulgation of such standards. Standards of performance, or revision thereof, shall become effective upon promulgation. In establishing or revising Federal standards of performance for new sources under this section, the Administrator

shall take into consideration the cost of achieving such effluent reduction, and any non-water quality environmental impact and energy requirements.

(2) The Administrator may distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards and shall consider the type of process employed (including whether batch or continuous).

(3) The provisions of this section shall apply to any new source owned or operated by the United States.

(c) State enforcement of standards of performance.

Each State may develop and submit to the Administrator a procedure under State law for applying and enforcing standards of performance for new sources located in such State. If the Administrator finds that the procedure and the law of any State require the application and enforcement of standards of performance to at least the same extent as required by this section, such State is authorized to apply and enforce such standards of performance (except with respect to new sources owned or operated by the United States).

(d) Protection from more stringent standards.

Notwithstanding any other provision of this chapter, any point source the construction of which is commenced after October 18, 1972, and which is so constructed as to meet all applicable standards of performance shall not be subject to any more stringent standard of performance during a ten-year period beginning on the date of completion of such construction or during the period of depreciation or amortization of such facility for the purposes of section 167 or 169 (or both) of Title 26, whichever period ends first.

(e) Illegality of operation of new sources in violation of applicable standards of performance.

After the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source. (June 30, 1948, ch. 758, title III, § 306, as added Oct. 18, 1972, Pub. L. 92-500, § 2, 86 Stat. 854.)

* * * * *

Section 501

§ 1361. Administration.

(a) Authority of Administrator to prescribe regulations.

The Administrator is authorized to prescribe such regulations as are necessary to carry out his functions under this chapter.

(b) Utilization of other agency officers and employees.

The Administrator, with the consent of the head of any other agency of the United States, may utilize such officers and employees of such agency as may be found necessary to assist in carrying out the purposes of this chapter.

* * * * *

Section 502

§ 1362. Definitions.

Except as otherwise specifically provided, when used in this chapter:

(1) The term "State water pollution control agency" means the State agency designated by the Governor having responsibility for enforcing State laws relating to the abatement of pollution.

(2) The term "interstate agency" means an agency of two or more States established by or pursuant to an agreement or compact approved by the Congress, or any other agency of two or more States, having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator.

(3) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

(4) The term "municipality" means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 1288 of this title.

(5) The term "person" means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body.

(6) The term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. This term does not mean (A) "sewage from vessels" within the meaning of section 1322 of this title; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

(7) The term "navigable waters" means the waters of the United States, including the territorial

(8) The term "territorial seas" means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles.

(9) The term "contiguous zone" means the entire zone established or to be established by the United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone.

(10) The term "ocean" means any portion of the high seas beyond the contiguous zone.

(11) The term "effluent limitation" means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical,

physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.

(12) The term "discharge of a pollutant" and the term "discharge of pollutants" each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.

(13) The term "toxic pollutant" means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

(14) The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

(15) The term "biological monitoring" shall mean the determination of the effects on aquatic life, including accumulation of pollutants in tissue, in receiving waters due to the discharge of pollutants (A) by techniques and procedures, including sampling of organisms representative of appropriate levels of the food chain appropriate to the volume and the physical, chemical, and biological characteristics of the effluent, and (B) at appropriate frequencies and locations.

(16) The term "discharge" when used without qualification includes a discharge of a pollutant, and a discharge of pollutants.

(17) The term "schedule of compliance" means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.

* * * * *

Section 509

§ 1360. Administrative procedure and judicial review.

(a) (1) For purposes of obtaining information under section 1315 of this title, or carrying out section 1367(e) of this title, the Administrator may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and he may administer oaths. Except for effluent data, upon a showing satisfactory to the Administrator that such papers, books, documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of section 1905 of Title 18, except that such paper, book, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter, or when relevant in any proceeding under this chapter. Witnesses summoned shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person under this subsection, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator, to appear and produce

papers, books, and documents before the Administrator, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(2) The district courts of the United States are authorized, upon application by the Administrator, to issue subpoenas for attendance and testimony of witnesses and the production of relevant papers, books, and documents, for purposes of obtaining information under sections 1314(b) and (c) of this title. Any papers, books, documents, or other information or part thereof, obtained by reason of such a subpoena shall be subject to the same requirements as are provided in paragraph (1) of this subsection.

(b) (1) Review of the Administrator's action (A) in promulgating any standard of performance under section 1316 of this title, (B) in making any determination pursuant to section 1316(b)(1)(C) of this title, (C) in promulgating any effluent standard, prohibition, or treatment standard under section 1317 of this title, (D) in making any determination as to a State permit program submitted under section 1342(b) of this title, (E) in approving or promulgating any effluent limitation or other limitation under section 1311, 1312, or 1316 of this title, and (F) in issuing or denying any permit under section 1342 of this title, may be had by any interested person in the Circuit Court of Appeals of the United States for the Federal judicial district in which such person resides or transacts such business upon application by such person. Any such application shall be made within ninety days from the date of such determination, approval, promulgation, issuance or denial, or after such date only if such application is based solely on grounds which arose after such ninetieth day.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) of this subsection shall not be subject to judicial review in any civil or criminal proceeding for enforcement.

(c) In any judicial proceeding brought under subsection (b) of this section in which review is sought of a determination under this chapter required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence. (June 30, 1948, ch. 758, title V, § 509, as added Oct. 18, 1972, Pub. L. 92-500, § 2, 86 Stat. 891.)

APPENDIX B

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

AMERICAN PAPER INSTITUTE

Plaintiff

v.

RUSSELL TRAIN, et al.

Defendants

Civil Action No. 74-814
1703-75

FILED

SEP 20 1974

JAMES E. DAVEY, Clerk

MEMORANDUM OPINION

Plaintiff brought this action to set aside certain regulations setting forth water pollution effluent limitations guidelines and standards of performance for the pulp, paper and paperboard industries. These regulations were published pursuant to the Federal Water Pollution Control Act Amendments of 1972 ("FWPCA" or "the Act"); Pub.L. 92-500, 86 Stat. 816, 33 U.S.C. § 1251 et seq. (October 18, 1972)^{1/}

The precise issue is whether this Court has jurisdiction to review the regulations in question. Plaintiff contends that the challenged regulations are reviewable in this Court pursuant to the Administrative Procedure Act ("the APA"), 5 U.S.C. 555 et seq. Defendants maintain that the regulations are effluent limitations issued pursuant to § 301 of the Act, 33 U.S.C. § 1311.

^{1/} Regulations under challenge were promulgated by EPA at 40 C.F.R. §§ 430.10 through 430.55, 39 Fed. Reg. 18742 (May 23, 1974) and at 40 C.F.R. §§ 430.10 through 430.52, 39 Fed. Reg. 4527 (February 4, 1974) insofar as they are amended to 40 C.F.R. §§ 430.10 through 430.55 and are reviewable only by a Court of Appeals, pursuant to § 502(b)(1) of the Act, 33 U.S.C. § 1362.

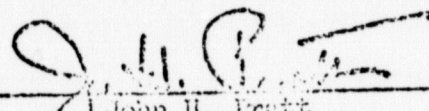
Plaintiff's argument appears to be that the regulations in question are guidelines issued pursuant to § 304(b) of the Act, 33 U.S.C. § 1314(b) or that, if not guidelines, are void limitations promulgated erroneously in the stead of guidelines. In either event; plaintiff claims these regulations are reviewable in this Court under the provisions of the APA (Section 10(a)). Assuming arguendo that the regulations are guidelines only, or guidelines divisible from limitations for purposes of review, we hold that this Court does not have jurisdiction to review.

The FWPCA at § 304(b) provides for the promulgation of guidelines as an aid to the establishment of effluent limitations standards of performance for existing point sources, such limitations to be promulgated for use in the permit issuance mechanism to be put in effect no later than July 1, 1977. See 33 U.S.C. §§ 1311 and 1314(b). Since guidelines are only an aid in establishing effluent limitations and since limitations, not guidelines, comprise the standards of performance for the issuance of permits, plaintiff cannot be heard to complain that it is "adversely affected or aggrieved" by guidelines, the criteria of Section 10(a) of the APA. If these regulations are limitations, which this Court holds they in fact are, § 509 of the FWPCA provides for review by a United States Court of Appeals and not by a United States District Court. We therefore lack subject matter jurisdiction.

As to whether review of these regulations might be had in this Court as well as the Court of Appeals, the law is clear

that "when Congress has specified a procedure for judicial review of administrative action, courts will not make nonstatutory remedies available without a showing of patent violation of agency authority or manifest infringement of substantial rights irremediable by the statutorily prescribed method of review. . . ."

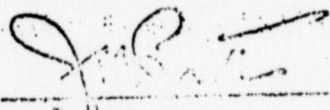
Nader v. Volpe, 151 U.S. App. D.C. 90, 95, 466 F.2d 261, 266 (1972). Accordingly, plaintiff's complaint is dismissed for the jurisdictional reason already set forth. An order consistent with the foregoing has been entered this date.


John H. Pratt
United States District Judge

September 18, 1974

ORDER

The Motion to Dismiss filed by the defendants in this action is GRANTED, and the action is hereby DISMISSED, on the ground that the regulations challenged by the plaintiff in this suit are effluent limitations which, pursuant to Section 509 of the Federal Water Pollution Control Act Amendments of 1972, are subject to review only in United States Courts of Appeals.



Judge

18 SEP 24
Date



APPENDIX C

Clerk's Office U. S. Dist. Court
AT ROANOKE, VA.
FILED

SEP 27 1974

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
ROANOKE DIVISION

JOYCE F. WITT, CLERK
By: *N. H. G. G. G. G.*

E. I. DuPONT DE NEMOURS) CIVIL ACTION NO. 74-57
and COMPANY, et al,)
Plaintiffs,) OPINION and ORDER
v.)
) BY: James C. Turk, Chief U. S.
) District Judge
RUSSELL E. TRAIN, et al,)
Defendants.)

This suit is brought by eight chemical manufacturers seeking declaratory and injunctive relief against the Administrator and Deputy Administrator of the Environmental Protection Agency (EPA). The case is presently before the court pursuant to plaintiffs' motion for partial summary judgment and declaratory judgment and the defendants' motion to dismiss for lack of subject matter jurisdiction or alternatively to stay the proceedings.

Plaintiffs ultimately seek to have this court enjoin and set aside certain regulations promulgated by the Administrator of the EPA governing the effluent discharge of sulfuric acid plants on grounds that they are arbitrary, capricious, not supported by

substantial evidence, beyond the statutory authority of EPA and not in accord with procedures of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. § 1251 et seq ("The Act") and the Administrative Procedure Act. Resolution of these allegations requires factual determinations and they are accordingly not now ripe for disposition. However, plaintiffs also raise several issues of statutory construction not dependent upon factual determinations and which may result in the disposition of the case at this time. The following issues are now before the court for resolution:

1. Whether the Administrator of the EPA has the authority under section 301(b) of the Act to issue regulations establishing effluent limitations for sulfuric acid plants;
2. Whether the regulations in question conform to section 304(b) of the Act and the notice and public participation provisions of the Administrative Procedure Act; and
3. Whether this court has jurisdiction to review the regulations in question and the procedures by which they were promulgated, or whether as defendants contend, this suit should be dismissed for lack of subject matter jurisdiction.

THE STATUTE

The Federal Water Pollution Control Act Amendments of 1972, while technically amending the Federal Water Pollution Control Act of 1965, 33 U.S.C. §§ 1151 et seq, is in effect a comprehensive statute in its own right. Section 101(a) of the Act states as its objective "to restore and maintain the chemical,

physical and biological integrity of the Nation's waters," and states as two of its goals "that the discharge of pollutants into the Navigable waters be eliminated by 1985" and "that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983." Of primary interest to this suit are sections 301, 304 and 402, which establish the regulatory framework for achieving the above goals and section 509(b)(1) providing for judicial review of the Administrator's actions.

Section 301(a) makes it unlawful for any person to discharge any pollutant except as in compliance with certain enumerated sections of the Act including section 301. Section 301(b) then states:

"In order to carry out the objective of this Act, there shall be achieved--

"(1) (A) not later than July 1, 1977, effluent limitations for point sources... (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of this Act....

"(2) (A) not later than July 1, 1983, effluent limitations for categories and classes of point sources...which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to

section 304(b) (2) of this Act, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 315), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 304(b) (2) of this Act...."

Section 304(b) to which section 301(b) refers provides:

"For the purpose of adopting or revising effluent limitations under this Act the Administrator shall, after consultation with appropriate Federal and State agencies and other interested persons, publish within one year of enactment of this title, regulations, providing guidelines for effluent limitations, and at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall--

"(1) (A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best practicable control technology currently available for classes and categories of point sources; and

"(B) specify factors to be taken into account in determining the control measures and practices to be applicable to point sources...within such categories or classes. Factors relating to the assessment of best practicable control technology currently available to comply with subsection (b) (1) of section 301 of this Act shall include consideration of the total cost of application of

technology in relation to the effluent reduction benefits to be achieved from such application, and shall also take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

"(2) (A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods, and other alternatives for classes and categories of point sources...; and

"(B) specify factors to be taken into account in determining the best measures and practices available to comply with subsection (b) (2) of section 301 of this Act to be applicable to any point source... within such categories or classes. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate; and

"(3) identify control measures and practices available to eliminate the discharge of pollutants from categories and classes of point sources, taking into account the cost of achieving such elimination of the discharge of pollutants."

The statutory scheme further provides for a national system of discharge permits known as the "National Pollutant

Discharge Elimination System" (NPDES) to insure that the control levels established by the Act are achieved. Thus, section 402(a)

(1) states:

"Except as provided in sections 318 and 404 of this Act, the Administrator may, after opportunity for a public hearing, issue a permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 301(a), upon condition that such discharge will meet either all applicable requirements under sections 301, 302, 306, 307, 308 and 403 of this Act, or prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of the Act."

Section 402(b-e) further provides that the permit issuing authority be given to the individual states which submit a program which meets the requirements of the Act, although the Administrator retains the power to prevent the issuance of a permit he deems to be "outside the guidelines and requirements of this Act." § 402(d)(2).

Section 509(b) provides for judicial review of the Administrator's determinations:

"(1) Review of the Administrator's action (A) in promulgating any standard of performance under section 306, (B) in making any determination pursuant to section 306(b)(1)(c), (C) in promulgating any effluent standard, prohibition, or treatment standard under section 307, (D) in making any determination as to a state permit program submitted under section 402(b), (E), in approving or promulgating any effluent limitation or other limitation under section 301, 302, or 306, and (F) in issuing or denying any permit under section 402, may be had by any interested person in the Circuit Court of Appeals of the United States for the federal judicial district in which such person resides or transacts such business upon application by such person. Any

such application shall be made within ninety days from the date of such determination, approval, promulgation, issuance, or denial, or after such date only if such application is based solely on grounds which arose after such ninetieth day.

"(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) of this subsection shall not be subject to judicial review in any civil or criminal proceeding for enforcement."

THE REGULATIONS

On August 6, 1973, the EPA published notice of proposed rulemaking "with respect to effluent limitations guidelines, standards of performance and pretreatment standards for new sources." 38 Fed. Reg. 21202. On October 11, 1973, EPA published notice of proposed rulemaking for 40 C.F.R. Part 415, "Effluent Limitations Guidelines and Standards of Performance and Pretreatment for Inorganic Chemicals Manufacturing Point Source Category." 38 Fed. Reg. 28174 et seq. These proposed regulations subdivided the inorganic chemicals manufacturing category into twenty-two sub-categories, each representing a different chemical, including sulfuric acid. With respect to sulfuric acid, the proposal discussed the three principal methods of manufacture - double absorption plants, single absorption plants and spent acid plants - and stated that the proposed regulations would not apply to spent acid plants. However, the proposed regulations for both single and double absorption plants established the standard of "no discharge of process waste water pollutants to navigable waters" both "after application

of the best practicable control technology currently available" and "after application of the best available technology economically achievable." 38 Fed. Reg. 28192. After receiving additional comments, including comments from seven of the plaintiffs to this suit, 39 Fed. Reg. 9612, final regulations were issued on March 12, 1974 for 40 C.F.R. Part 415 (Inorganic Chemicals Manufacturing Point Source Category). The Administrator declined to change the basic proposed regulations for sulfuric acid production, and the "no discharge of process waste water pollutants" went into effect. 40 C.F.R. §§ 415.212, 415.213, 39 Fed. Reg. 9634. The proposed regulations for sulfuric acid production (as well as other subcategories in the Inorganic Chemicals Manufacturing Group) were modified with regard to the limitations representing best practicable control technology currently available (40 C.F.R. § 415.212), by providing that the "no discharge" standard might be adjusted for certain plants by the Regional Administrator or the State in issuing an NPDES permit; according to the regulation, such an adjustment could be made on the basis of a showing that certain factors peculiar to the discharger are "fundamentally different" than the factors considered in formulating the regulation. 40 C.F.R. § 415.212, 39 Fed. Reg. 9634.

Plaintiffs' statutory construction argument is essential that the regulations for sulfuric acid plants are not valid effluent "guidelines" complying with the requirements of section 304(b). They contend that the word "guidelines" in section 304(b) is a term of

art which contemplates the administrative promulgation of broadly outlined regulations to serve as a starting point for the development of specific restrictions which would then be individualized for each discharger by way of permits issued by the Regional Administrator or State pursuant to § 402 with such permits embodying the "limitations to be "achieved" pursuant to § 301. In support of this construction plaintiffs note that § 304(b) requires that the guidelines to be published as regulations contain two elements: (1) the degree of effluent reduction "attainable" by 1977 using the "best practicable control technology currently available" and by 1983 using the "best available control measures and practices achievable" for classes and categories of point sources; and (2) a specification of the factors to be taken into account in determining the control measures applicable to point sources within such categories or classes in order to attain these goals. Thus plaintiffs argue that the regulations were intended to be flexible guidelines and not prescriptive rules applicable across the board to all plants in a given category (i.e. sulfuric acid plants) and the permit granting agency would look to the guidelines for determining the degree of effluent-limitation attainable for a given plant.

Plaintiffs' specifically contend that the regulations for sulfuric acid plants fail to discuss the statutory factors and hence provide no guidance to the permit-granting authorities. Furthermore, they contend that the EPA's construction and implementation of the Act would frustrate the intent of Congress in allowing the States to play a major role in implementing the Act. They argue that by making the

regulations binding prescriptions in the form of specific limitations instead of a "range" of discharge levels together with factors to be taken into account for discrete industrial categories, the EPA has deprived the States of discretion in administering the NPDES program. This is said to be contrary to the intent of Congress expressed in § 101(b) of the Act "to recognize, preserve and protect the primary responsibilities and rights of the States to prevent, reduce and eliminate pollution...."

Based on their construction of the Act, plaintiffs then contend that review in the Court of Appeals pursuant to § 509(b)(1) of the Act is not available to challenge the regulations constituting effluent guidelines under § 304(b). Since § 509(b) provides only for review of EPA actions under sections 301, 302, 306, 307 and 402 of the Act, review of other regulatory actions by the EPA as well as certain other agencies empowered to act under the Act would proceed under the Administrative Procedure Act, 5 U.S.C. § 702, through other jurisdictional statutes such as the Mandamus and Venue Act of 1962, 28 U.S.C. § 1361.¹ Thus plaintiffs argue that review of § 304(b) guidelines is not encompassed by § 509(b). In support of this position, plaintiffs point out that each of the sections specified in § 509(b) allow regulatory actions by the EPA which may then be enforced by the Administrator pursuant to § 309 or by "any citizen" pursuant to § 505 by way of a civil suit in the district court.

They argue that actions taken pursuant to sections not specified in § 509(b), including guidelines issued pursuant to § 304(b), require further implementing steps, and hence a decision of broad precedential effect by a Court of Appeals was not deemed necessary in the first instance.

In contrast, defendants contend that the Act contemplates that the Administrator promulgate actual effluent limitations which will then be uniformly applied by the Administrator or the states in issuing NPDES permits under section 402. According to their construction, section 304(b) guidelines have no direct relationship to permit proceedings under section 402, but merely provide a basis for establishing the effluent limitations. They accordingly argue that the regulations are effluent limitations properly established pursuant to section 301(b).

Defendants view the regulations in question, 45 C.F.R. §§ 415.212, 415.213, as valid effluent limitations promulgated pursuant to section 301(b) with the fixed number of zero for the discharge of process waste water from sulfuric acid plants being the established limitation. In addition they contend that 45 C.F.R. Part 415 establish the "guidelines" required by section 304(b) by subdividing the inorganic chemical manufacturing group into 22 subcategories of specific chemicals². Thus defendants contend that the regulations are "guidelines" issued pursuant to section 304(b) by way of subcategorization, but are effluent limitations in terms of the specific numerical restrictions imposed.

On the basis of this construction, defendants argue that jurisdiction to review the regulations is exclusively in the Court of Appeals pursuant to section 509(b) (1) (E). Furthermore, it is asserted that since the "guidelines" are intertwined with and provide a definitional basis for the limitations, they should also be reviewed in the Court of Appeals.

II

The issue of statutory construction presented in this case is one of first impression³ in which the court must seek the intent of Congress from the words and structure of the statute and its legislative history. Although the varying interpretations of the Act presented by the parties both find support in the statute and its history, for the reasons which follow the court concludes:

(1) that the Administrator was authorized to promulgate by regulation the effluent limitations in issue; (2) that the structural and content requirements of such regulations under section 304(b) were satisfied; and (3) that judicial review of these limitations and guidelines is exclusively in the Court of Appeals under section 509(b) (1) (E).

1.

Taken as a whole, the various sections of the Act support the defendants' construction that section 301(b) effluent limitations were intended to be promulgated as regulations apart from section 402 permit proceedings. This is implicitly supported by section 509(b) (1) (E) which provides for review of the Administrator's actions "in approving or promulgating any effluent limitation under section

301, 302, or 306...." The independence of such limitations is also implicit in section 505 which provides in subsection (a) for any citizen to sue for a violation of "an effluent standard or limitation under this Act"; but even more revealing is section 505(f) which defines "effluent standard or limitation under this Act" to include six separate definitions among which are: "(1) effective July 1, 1973, an unlawful act under subsection (a) of section 301 of this Act, (2) an effluent limitation or other limitation under section 301 or 302 of this Act; ... or (6) a permit or condition thereof issued under section 402 of this Act...." Obviously under plaintiffs' construction of the Act the second definition quoted above would be redundant with the sixth. Plaintiffs have offered no explanation for this apparent inconsistency with their position.

Plaintiffs would avoid the implication of section 509(b) (1) (E) by construing the word "promulgating" in section 509(b) (1) (E) as applying only to section 302 and the word "approving" as having application to effluent limitations under sections 301 or 306. In support of this construction, plaintiffs point out that section 402(b) allows a state to develop a plan for issuing permits and thus displace the Administrator's authority to issue permits; and further that section 402(d) provides a check on the states by allowing the Administrator to veto a permit issued by the state:

"(d) (1) Each state shall transmit to the Administrator a copy of each permit application received by such State and provide notice to the Administrator of every action related to the consideration of such permit application, including each permit proposed to be issued by such State.

"(2) No permit shall issue... (b) if the Administrator within ninety days of the date of transmittal of the proposed permit by the State objects in writing to the issuance of such permit as being outside the guidelines and requirements of this Act. (plaintiffs' emphasis).

From these sections, plaintiffs argue that the use of "approving" in section 509(b) (1) (E) was in reference to the Administrator's action in reviewing effluent limitations under section 301(b) or standards of performance under section 306⁴ which would be set by the States in permits. They further contend that such approval was a necessary element inasmuch as such a federal connection to a state program was necessary in order to justify review in the federal courts. On the other hand, plaintiffs argue that section 302⁵ provides for the promulgation of effluent limitations by the Administrator in certain defined situations without a provision for state implementation. This is said to explain the use of "promulgating" in section 509(b) (1) (E).

Such a construction of section 509(b) (1) (E) is unconvincing for several reasons. First, section 302 does not require that effluent limitations be "promulgated"; rather it states that "effluent limitations...shall be established." The court fails to see a distinction between the establishment of limitations under section 302 and the achievement of limitations under section 301(b)

particularly in view of the language used in section 301(e):

"Effluent limitations established pursuant to this section or section 302 of this Act shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this Act."

Similarly section 302(c) provides:

"The establishment of effluent limitations under this section shall not operate to delay the application of any effluent limitation established under section 301 of this Act."

Second, plaintiffs' construction of the interrelationship between section 509(b)(1)(E) and section 402(d)(1) and (2) ignores the fact that sections 402(d)(3), 402(e) and 402(f) allow the Administrator to waive review of permits issued by the States, and thus in such situations, by plaintiffs' analysis, there would be no federal judicial review under section 509(b)(1). Finally, the reference to "guidelines and requirements of this Act" in section 402(d)(2) would appear to section 304(h) guidelines⁶ (as opposed to section 304(b) guidelines) in view of the references to "guidelines" in sections 402(b), 402(c)(1), and 402(c)(2) and 402(e) being specifically to section 304(h) guidelines.

Even more strongly suggestive of the conclusion that section 301(b) limitations were intended to be promulgated as regulations is the interrelationship between section 301(b) and 304(b). Thus the requirements of sections 304(b)(1)(A) and 304(b)(2)(A) that the Administrator publish regulations which identify

the degree of effluent reduction attainable by 1977 and 1983 appears to contemplate the issuance of actual effluent limitations which are referred to in section 301(b) (1) (A) as being "defined by the Administrator pursuant to section 304(b) of this Act" and in section 301(b) (2) (A) as being "determined in accordance with regulations issued by the Administrator pursuant to section 304(b) (2) of this Act...."

Both plaintiffs and defendants quote the definition of effluent limitation in section 502(11) in support of their respective interpretations of the Act:

"The term 'effluent limitation' means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance. "

Plaintiffs argue that since a state cannot issue regulations the definition indicates that effluent limitations do not involve regulations and that the definition contemplates that both the states and the EPA will have a shared role in establishing effluent limitations. However, the court does not perceive this definition as being inconsistent with the defendants' construction of the Act and the regulations herein challenged since the effluent limitations promulgated by the Administrator may nevertheless be "established" for a given discharger through a permit issued by a state which has satisfied the requirements of section 402.

Further support for the conclusion that NPDES permits issued pursuant to section 402 would embody the effluent limitations previously established by the Administrator is implicit in the fact that section 402(a) requires that such permits meet the "applicable requirements under section 301" but omits any reference to section 304(b) guidelines.

As noted, the regulations herein challenged establish the number of zero as the effluent limitation for both single and double absorption plants. The court is of the opinion from a consideration of the structure and wording of the Act that the Administrator had the authority to promulgate such limitations under section 301(b) pursuant to his authority under section 304(b). It follows that plaintiffs' substantive challenge to such limitations must be brought in the Court of Appeals pursuant to section 502(b) (1).

2.

Plaintiffs further challenge the regulations in question for failing to specify the factors to be taken into account in determining the control measures and practices to be applicable to point sources within such categories or classes, as required by section 304(b) (1) (B) and 304(b) (2) (B). As noted, defendants argue that the subcategorization in effect establishes "guidelines" under section 304(b). They contend that variations in plant age, size, manufacturing processes, raw materials etc. (section 304(b) (1) (B) and 304(b) (2) (B) factors) were taken into account by such subcategori-

zation. They further argue that this approach is consistent with the statutory scheme and facilitates the achievement of reasonably uniform limitations for similar point sources under section 301 of the Act.

The court notes that although the factors were not set forth as regulations as such, the regulations do indicate that the factors were considered. The regulations in question also indicate that the effluent limitations established could be varied for an individual discharger in an NPDES permit upon a showing "that factors relating to the equipment or facilities involved, the processes applied or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines...." 39 Fed. Reg. 9634; 45 C.F.R. § 415.212. In addition, defendants assert (and the regulations note) that the factors in question are analysed in a "Development Document."

In view of the aforementioned conclusion that sections 301(b) and 304(b) intend that the Administrator will publish effluent limitations for classes and categories of point sources, the court is of the opinion that the approach taken by the Administrator in specifying factors is in accord with section 304(b). In this regard it must be noted that the factors required to be specified under section 304(b) were not intended to exist in a vacuum. Rather, both sections 304(b) (1) (B) and 304(b) (2) (B) respectively require such factors in reference to "the assessment of best practicable

control technology currently available to comply with subsection (b) (1) of section 301" and "the best measures and practices available to comply with subsection (b) (2) of section 301". Thus the statute appears to contemplate the incorporation of such factors in the effluent limitations established under section 301, which was apparently done in this case. Accordingly, the court believes that any challenge to the Administrator's consideration of various factors or the weight given to each, like the challenge to the actual numerical limitations, is in essence a challenge to the Administrator's action in promulgating effluent limitations under section 301 and must be pursued under section 509(b) (1) (E) in the Court of Appeals.

The court further is of the opinion that section 509(b) is consistent with the above construction of the Act. It is reasonable to assume that by providing original judicial review in the Courts of Appeals of effluent limitations under section 509(b) along with strict time limitations and prohibitions on review by way of criminal or other civil proceedings, Congress sought to establish expeditious and consistent application of limitations.⁷ However, by plaintiffs' construction of the Act, actual effluent limitations would always be individualized for dischargers in NPDES permits, thus limiting the broad precedential effect of any judicial decision approving or rejecting any such limitation. Furthermore, if plaintiffs could challenge section 304(b) guidelines in the district court and section 301(b) limitations in the Courts of Appeal, this would create

duplicitous litigation because of the close interrelationship between these sections and the fact that the administrative record in each suit would be virtually identical. In addition, any successful challenge to guidelines in the district court would affect the limitations which could only be challenged in the Courts of Appeal and would thus hinder the goal of prompt judicial review.

The legislative history of the Act is generally consistent with the stated conclusions concerning the relationship between sections 301, 304 and 402 and the Administrator's authority to establish the effluent limitations in issue. Both the House Report accompanying H.R. 11896 and the Senate Report accompanying S. 2770 indicate that the Administrator is to establish specific effluent limitations for subcategories of point sources. Thus the House Report stated:

"As required in section 304(b) (1) (A), the Administrator, by regulations, is to identify the degree of effluent reduction attainable by the application of the best practicable control technology currently available for classes and categories of point sources. By this the Committee expects that the Administrator will concentrate on, but not be limited to, those categories of point sources enumerated in section 306(b) (1) (A) and any which the Administrator might add to that list. The Committee expects that the identification will be in objective terms and will set out actual performance levels for the

classes and categories of point sources rather than prescribing specific control techniques, processes or equipment." H. Rep. No. 92-911, 92d. Cong., 2d Sess., 107 (1972), reprinted in Senate Committee on Public Works, Committee Print, A Legislative History of the Water Pollution Control Act Amendments of 1972, 93d Cong. 1st Sess., at 794 (1973) (hereinafter "Legislative History"). (emphasis added).

The Senate Report similarly indicates that effluent limitations will be established by regulations, and in addition indicates that the defendants' approach in incorporating factors into such limitations is consistent with the statutory scheme.

"It is the Committee's intention that pursuant to subsection 301(b)(1)(A), and Section 304(b) the Administrator will interpret the term 'best practicable' when applied to various categories of industries as a basis for specifying clear and precise effluent limitations to be implemented by January 1, 1976. In defining best practicable for any given industrial category, the Committee expects the Administrator to take a number of factors into account. These factors should include the age of the plants, their size and unit processes involved and the cost of applying such controls. In effect, for any industrial category, the Committee expects the Administrator to define a range of discharge levels, above a certain base level applicable to all plants within that category. In applying effluent limitations to any individual plant, the factors cited above should be applied to that specific plant. In no case however, should any plant be allowed to discharge more pollutants than is defined by that base level." S. Rep. No. 92-414, 92d Cong., 1st Sess. p. 50; Legislative History at 1468. (emphasis added).

Plaintiffs argue that the reference to the Administrator establishing a "range of discharge levels" supports their construction of the

Act. However, by creating narrow subcategories of point sources subject to different limitations, the Administrator has in effect created a range of discharge levels for various categories of point sources--in this case the category being inorganic chemicals manufacturing. In any case, the determination herein challenged set the limitation of "no discharge of process waste water" for two types of sulfuric acid plants, indicating that in the Administrator's opinion a range of numbers was inappropriate. Whether the substance of this decision was correct is, as noted above, to be challenged under section 509(b) (1) (E) in the Court of Appeals.

In the Conference Report on S. 2770 the following was stated with respect to section 304(b):

"In determining the 'best available technology' for a particular category or class of point sources, the Administrator is directed to consider the cost of achieving effluent reduction. The Conference intend that the factors described in section 304(b) be considered only within classes or categories of point sources and that such factors not be considered at the time of application of an effluent limitation to an individual point source within such a category or class.

"Except as provided for in section 301(c) of the Act, the intent is that effluent limitations applicable to individual point sources within a given category or class be as uniform as possible. The Administrator is expected to be precise in his guidelines so as to assure that similar point sources with similar characteristics, regardless of their location or the nature of the water into which the discharge is made, will meet similar effluent limitations.

"The Conferees have provided, however, a mechanism for individual point source-by-source consideration in section 301(c). That section provides that the Administrator may modify any effluent limitation based on 'best available technology' to be achieved by July 1, 1983, with respect to any point source, upon a showing by the owner or operator of such point source that an effluent limitation so modified will represent the maximum use of technology within the economic capability of the operator and will result in reasonable further progress toward the goal of the elimination of the discharge of pollutants." 118 Cong. Rec. S. 16874 (daily ed., Oct. 4, 1972; Legislative History at 172. (emphasis added)).

This quotation appears to be basically consistent with defendants' interpretation of the Act. Specifically it supports the defendants' construction that section 304(b) factors may be utilized to create subcategories subject to uniform, specific effluent limitations and refutes plaintiffs' contention that such factors are to have an independent status for the purpose of establishing discharge levels for individual plants.

4.

Plaintiffs have raised a final contention concerning the promulgation of the regulations in question which is a concomitant to their other allegations based on their construction of the statute. They argue that in issuing the regulations for inorganic chemicals, the Administrator failed to adhere to the notice and opportunity-to-comment requirements of the Administrative Procedure Act, 5 U.S.C. ...

§ 553. There is apparently no dispute that notice of proposed rulemaking was published in the Federal Register on August 6, 1973 (38 Fed. Reg. 21202) and October 11, 1973 (38 Fed. Reg. 28174) and extensive comments were received from the public, including the plaintiffs. The final regulations issued on March 12, 1974 summarized the major comments received since October 11 notice of proposed rulemaking.

The plaintiffs now contend, however that they approached the proposed regulations, on the assumption that such regulations would be flexible "guidelines" issued under section 304(b) and not actual effluent limitations to be mechanically applied to all plants in a given subcategory. Thus they argue that by promulgating actual effluent limitations, the Administrator rendered ineffective the notice and public participation requirements of the APA.

Although the record before the court tends to belie plaintiffs' allegations of surprise and prejudice, the court does not now decide this claim. Rather, the court is of the opinion that in view of its construction of the Act, supra, review of this procedural claim should also proceed in the Court of Appeals. Section 509(b)(1)(E) provides for jurisdiction in the Court of Appeals to review "the Administrator's action" in "promulgating any effluent limitation or other limitation under section 301."

This jurisdictional section is unqualified, and the court perceives no reason why review of the adequacy of notice and public participation regarding regulations which establish effluent limitations, should not proceed in the same manner as a suit challenging the substantive action of the Administrator in setting particular limitations.

To summarize, the court concludes that the regulations herein challenged are effluent limitations established by the Administrator pursuant to section 301(b) and 304(b); and that review of both the substance of such limitations and the procedures utilized in establishing the same is exclusively in the Court of Appeals pursuant to section 509(b) (1) (E). Accordingly, for the reasons stated defendants' motion to dismiss this suit for lack of subject matter jurisdiction is hereby granted.

A TRUE COPY, 1974:

[Handwritten signature]
Deputy Clerk

DATED: This 27 day of September, 1974.

[Handwritten signature]
Chief U. S. District Judge

F O O T N O T E S

1. As a basis for jurisdiction to review what they consider to be section 304(b) "guidelines" plaintiffs also cite 28 U.S.C. §§ 1331, 1332, 1337 and 1651; the Declaratory Judgment Act, 28 U.S.C. §§ 2201-2202; and the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

2. The Administrator's approach was explained in the regulations as follows:

The approach taken in developing effluent limitations guidelines and standards of performance for the inorganic chemicals manufacturing industry was to examine all variables and segment the industry into workable subcategories consistent with these variations. Twenty-two subcategories have been established based on the chemical product manufactured. In cases where two dissimilar processes are used to manufacture the same product separate limitations have been established within the subcategory. Thus, ranges are provided for, as are other factors, by segmenting the inorganic chemicals manufacturing point source category into discrete subcategories, each with its own limitation. 39 Fed. Reg. 9612 (March 12, 1973).

3. Plaintiffs cite ^(NATURAL) National Resources Defense Council v. Train, 6 E.R.C. 1033 (D.D.C. 1973) in support of their construction of the Act. That case involved a (citizen's) suit [under section 505(a) of the Act] to compel the Administrator to publish effluent limitation guidelines after expiration of the time period established by the Act. However, that case did not consider the issue of statutory construction now presented.
4. Section 306(b) provides that the Administrator shall publish regulations "establishing Federal standards of performance for new sources" within a category of sources. Plaintiffs point out that section 509(b)(1)(A) specifically provides for review of these "standards of performance." Section 306(c) authorizes the states to develop a procedure for applying and enforcing standards of performance for new sources located within the state which may then be approved by the Administrator. Plaintiffs contend that the implementation of these standards of performance would occur in permit proceedings which would be subject to approval by the Administrator in a manner similar to section 301(b) effluent limitations.
5. Section 302(a) authorizes the Administrator to "establish" "water quality" related "effluent limitations" when he finds that
"discharges of pollutants from a point source or group of point sources, with the application of effluent limitations required under section 301(b)(2) (the technology-based limitations to be achieved by 1983), would interfere with the attainment or maintenance of that water quality in a specific portion of the navigable waters which shall assure protection of public water supplies...."

6. These pertain to the procedural requirements of a state-operated permit program.
7. There is very little legislative history relative to section 509(b). The bill as originally passed by the House provided for judicial review in the ~~district~~ courts whereas the Senate bill provided for review of certain administrative actions in the Court of Appeals for the District of Columbia and others in the Courts of Appeal for the appropriate circuit. H.R. 11896, 92d Cong., 2d Sess. § 509(b) (1972); S. 2770, 92d Cong., 1st Sess. § 509(b).



IN THE UNITED STATES COURT OF APPEALS

FOR THE SECOND CIRCUIT

Nos. 74-1683, 74-1687

HOOKEr CHEMICALS AND PLASTICS CORPORATION,
STAUFFER CHEMICAL COMPANY, AND MONSANTO COMPANY,

Petitioners

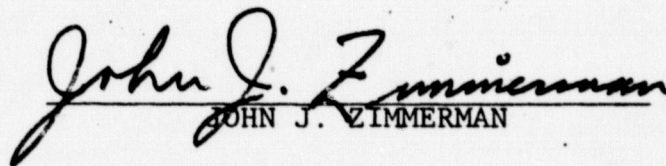
v.

RUSSELL E. TRAIN, ADMINISTRATOR OF THE
ENVIRONMENTAL PROTECTION AGENCY,

Respondent

CERTIFICATE OF SERVICE

I certify that two reproduced copies of the Briefs for Respondent have been served upon counsel, by placing same in the United States mail, postage prepaid, properly addressed, this 13th day of December, 1974, to: Douglas E. Kliever, Esquire, Cleary, Gottlieb, Steen & Hamilton, 1250 Connecticut Avenue, N. W., Washington, D. C. 20036.


JOHN J. ZIMMERMAN